



# **Information Technology Support Center**

## **Project Plans for Fiscal Year 2001**

**Version 2.0  
June 05, 2001**



## INTRODUCTION

### **Summary of IHS Information Technology Support Center (ITSC) Project Planning and Reporting Process for FY2001**

The IHS Information Technology Support Center (ITSC) provides the hands-on implementation and support of IT applications and infrastructure for the Indian Health Service, including RPMS application development, telecommunications, LAN/WAN support, computer security, support center, training, data analysis and reporting, and other related activities.

ITSC is organized into Teams that reflect specific technical areas:

- Application Software Development and Support Team (ASDS)
- Computer Systems Management (CSMT)
- National Patient Information Resource System Team (NPIRS)
- Self-Determination Services Team (SDST)
- Telecommunications Management Team (TMT)

ITSC uses a formal process each year for planning and prioritizing projects and staff assignments. The planning process stages include:

- project identification;
- resource estimates for both in house and contract staff;
- prioritizing based on ISAC criteria, legislated requirements, customer priorities, and other direction provided by the Division of Information Resources (DIR); and
- quarterly reviews to add or edit projects as needed.

In addition to compiling approved project requests into a quarterly Project Plan, ITSC also reports and publishes a weekly status report on all active projects. Copies of the current weekly status reports, as well as of the ITSC Project Plan, can be downloaded from the IHS web site: [www.ihs.gov](http://www.ihs.gov) and then click on Links/ Indian Health Service/ Chief Information Officer/ ITSC Projects.

The attached individual project plans describe the proposed project activities, provide information about the various business “drivers” that affect priorities, proposed staffing levels and schedule, and current status. Detailed status history for active projects is contained in the weekly status report.

Business drivers include priorities established by the Information Systems Advisory Committee (ISAC), security activities mandated by various legislation, initiatives advocated in the IHS *Information Technology Architecture (ITA)* and the *RPMS Growth Path Plan*, and similar external and internal influences. The IHS *ITA*, first published in FY2001, is an integrated framework of principles, guidelines and rules for IHS to use in evolving and maintaining existing IT and acquiring new IT to achieve the agency’s strategies and information resource management goals. The *RPMS Growth Path Plan* is a DIR initiative that presents the IHS plan to enhance its core information system, the Resource and Patient Management System (RPMS), to continue to meet the needs of its customers. The Growth Plan has two key focuses: utilizing

recent technology developments to improve existing and adding further functionality and realigning IHS infrastructure and applications with the Department of Veterans Affairs (VA) Veterans Health Administration (VHA).

### Current ISAC Goals

For additional information about ISAC: [www.isac.ihs.gov](http://www.isac.ihs.gov)

	<b>Title</b>	<b>Description</b>
01	Billing	Provide a quality Billing and Cost Accounting/ General Ledger system that is integrated to our Health Information System
02	Interoperability	Facilitate the interoperability with commercial systems, institute an open standards based information system for the I/T/Us
03	Annual Plan	Develop an annual operational plan based upon a survey of the I/T/U customer's wants
04	Technical Support	Provide effective technical support for the current Health Information System
05	Connectivity	Make accessible high-speed connectivity for all I/T/U customers to a secure common network that facilitates the transmission of voice, video and data services in an acceptably responsive and reliable manner
06	Staffing	Promote adequate staffing at all levels to support the information technology functions
07	GUI	Institute a graphical user interface (GUI) for the RPMS
08	Training	Provide effective Information Technology and Data Management Training at all levels
09	Decision Support	Provide universally accessible decision support information that positively impacts the management and delivery of health care
10	Comparability of	
11	Public Health Data	Ensure national comparability of public health data for all I/T/Us
11	Data Quality	Ensure quality public health and administrative data for all I/T/Us
12	CPR	Institute a state-of-the-art Computerized Patient Record (CPR) with the ability to manage clinical alerts/pathways and contains data integrated from the various facilities that a patient has visited
13	Administrative Environment	Institute a state-of-the-art administrative environment throughout the I/T/Us
14	Staff Equipment	Promote adequate computer systems for all I/T/U employees to perform their job
15	Partnerships	Promote partnerships between the I/T/Us and other agencies to work collaboratively on projects of mutual benefit
98	Legislated	Activities required by legislation, such as HIPAA, PDD-63, ADA 508, etc.

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A-104	Annual CPT File Update .....	17
A-105	Accounts Receivable (A/R) V.1.6 AHCCCS ERA .....	5
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A-107	Web Useability Evaluation and Redesign .....	158
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I-011	SQL Interface Evaluation and Implementation Plan.....	91
I-012	Windows 2000 Migration.....	171
I-022	Links & Document Management System Integration into Web Infrastructure.....	151
I-023	MyIHS Web Portal Enhancements.....	152
I-024	Internet/Intranet Services Operation and Maintenance .....	214
I-025	Americans with Disabilities Act Web Compliancy Initiative .....	140
I-027	Web Infrastructure Design & Implementation .....	157
I-028	Web Server Relocation.....	232



I-029	Implement Multi-Media Streaming Server .....	213
I-030	Kernel 8 Security Options Part 3 Implementation.....	168
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I-038	Virtual Private Network (VPN) Installation.....	229
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I-059	OPH SAS Program Support .....	130
I-060	Executive Information Support System (EISS).....	36
I-062	CORE Reports.....	108
I-063	File 200 Conversion .....	38
I-066	Network Intrusion Monitoring .....	216
I-069	National Interface Clearinghouse.....	116
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I-071	FY98 and FY99 APC and Inpatient Workload Verification .....	111
I-072	VHA Initiatives Monitoring .....	98
I-073	CDC Immunization Data Exchange Pilot.....	22
I-074	PCC Patch #5 and AIB Version 3.1 Implementation .....	131
I-075	HCFA Interface .....	114
I-076	Enterprise Storage Server Implementation.....	110
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I-082	ETrust Intrusion Detection Software Upgrade: URL Blocking Component.....	208
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O-030	ITSC Customer Service and User Policies & Procedures .....	53
O-031	Self-determination Negotiators Guide .....	201
O-032	Data Management Workgroup .....	183
O-033	NPIRS Data Archives Inventory .....	118
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R-004	Generic Interface System (GIS) Pilot .....	43
R-006	Data Modeling Planning and Implementation .....	29
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R-020	VistAion Evaluation .....	100
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## SUMMARY REPORT: Project Status, as of June 5, 2001

ID#	Project	% Compl.	Date Started	Date Completed
<b>Completed</b>				
<b>ASDS</b>				
A-042	ICD Code Updates	100%	10/16/2000	12/ 6/2000
A-104	Annual CPT File Update	100%	12/ 6/2000	12/29/2000
A-002	WebTop Pilot and Evaluation	100%	9/ 1/2000	3/22/2001
R-008	LOINC Prototype Implementation	100%	10/23/2000	3/30/2001
R-020	VistAion Evaluation	100%	12/ 1/2000	4/11/2001
A-052	Accounts Receivable (A/R) V.1.5 Reports Generation	100%	10/ 2/2000	6/ 6/2001
<b>ASDS-NPIRS</b>				
I-076	Enterprise Storage Server Implementation	100%	10/ 2/2000	5/18/2001
<b>ASDS-Web</b>				
A-025	Dental Online Training Site	100%	9/15/2000	12/15/2000
A-024	Web Conference Registration Services Development and Pilot	100%	10/ 2/2000	12/15/2000
A-026	Job Vacancies Database Consolidation and Enhancement Phase I	100%	9/ 1/2000	1/24/2001
A-021	Geographic Information Systems (GIS) Evaluation and Prototype	100%	4/ 3/2000	4/ 2/2001
O-009	Internet Privacy Issues Evaluation and Implementation	100%	10/ 2/2000	3/ 8/2001
<b>CSMT</b>				
R-001	GCPR Pilot Environment Setup and Maintenance	100%	8/21/2000	12/29/2000
<b>TMT</b>				
I-043	Session Wall 3 Implementation	100%	7/ 3/2000	
I-048	Norton Anti Virus Gateway Implementation	100%	10/ 2/2000	
I-049	Anti-virus Procurement for IHS Enterprise	100%	10/ 2/2000	3/29/2001
I-028	Web Server Relocation	100%	4/ 9/2001	4/27/2001
I-079	PIX Firewall 525 ITSC Installation	100%	12/ 1/2001	
<b>In Testing</b>				
<b>ASDS</b>				
A-074	PCC+ Customizable Encounter Form and Health Summary Phase I	90%	7/ 3/2000	
R-004	Generic Interface System (GIS) Pilot	90%	11/15/2000	
A-110	Patient Drug Education Database	90%	3/ 7/2001	
I-063	File 200 Conversion	89%	11/ 1/1999	
A-031	Contract Health System (CHS) V. 3.1 Completion and	88%	8/ 1/2000	

ID#	Project	% Compl.	Date Started	Date Completed
	Deployment			
A-103	Pharmacy Point of Sale (POS) Project	85%	8/ 1/2000	
A-038	Accounts Receivable (A/R) Debt Collection Package (Transworld)	83%	3/ 1/2000	
A-105	Accounts Receivable (A/R) V.1.6 AHCCCS ERA	82%	2/ 8/2001	
I-060	Executive Information Support System (EISS)	78%	9/18/2000	
A-075	Pyxis Implementation	72%	9/ 1/2000	
A-055	ENVOY Electronic Data Interchange (EDI) Deployment	70%	8/22/2000	
<b>In Progress</b>				
<b>ASDS</b>				
A-013	Health Level 7 (HL7) Maintenance for IHS	70%	12/ 1/2000	
A-082	PCC Enhancements	67%	10/ 2/2000	
A-050	Average Wholesale Price (AWP) Quarterly Update	67%	10/ 2/2000	
A-039	Administrative Resource Management System (ARMS) Certification	66%	7/ 3/2000	
I-004	Master Patient Index (MPI) Evaluation	61%	1/ 3/2000	
A-100	Patient Information Management System (PIMS)	60%	4/ 1/2000	
A-037	Administrative Resource Management System (ARMS) Travel Advance Form Automation	60%	9/ 1/2000	
A-001	Patient Chart GUI Evaluation and Deployment	55%	11/ 1/2000	
A-086	Referred Care Information System (RCIS) Modifications	46%	10/ 2/2000	
A-070	Patient Registration v. 7.0	45%	10/ 2/2000	
R-006	Data Modeling Planning and Implementation	22%	10/ 2/2000	
I-007	Enterprise Data Warehouse and DataMarts	10%	3/ 8/2001	
O-007	Standards and Conventions (SAC) Review	7%	2/16/2001	
A-035	Lab Electronic Review and Signature Enhancement	5%	12/ 7/2000	
A-108	Automated Sentinel Surveillance Pilot	5%	2/ 1/2001	
A-112	PCC+ Implementation Phase II	5%	5/ 1/2001	
A-003	X12 Evaluation and Implementation	5%	6/ 1/2001	
I-073	CDC Immunization Data Exchange Pilot	3%	2/ 2/2001	
O-002	ITSC Lifecycle Development Plan and Implementation	1%	3/ 1/2001	
<b>ASDS-NPIRS</b>				
I-075	HCFA Interface	92%	5/ 1/2000	
A-064	PHN (Public Health Nursing) Project Phase II	90%	2/11/2000	
I-077	Social Security Number (SSN) Verification	89%	7/ 1/1999	
I-074	PCC Patch #5 and AIB Version 3.1 Implementation	70%	2/ 1/2001	
O-018	NPIRS Lifecycle Development Process and Implementation	50%	10/ 2/2000	
I-071	FY98 and FY99 APC and Inpatient Workload Verification	50%	10/ 2/2000	
O-033	NPIRS Data Archives Inventory	38%	1/24/2001	

ID#	Project	% Compl.	Date Started	Date Completed
<b>ASDS-Web</b>				
I-027	Web Infrastructure Design & Implementation	60%	10/ 2/2000	
I-025	Americans with Disabilities Act Web Compliancy Initiative	50%	8/ 1/2000	
I-023	MyIHS Web Portal Enhancements	34%	10/ 2/2000	
I-022	Links & Document Management System Integration into Web	30%	11/15/2000	
A-107	Web Useability Evaluation and Redesign	20%	2/ 1/2001	
A-111	Dental Recruitment Web Site	10%	5/25/2001	
<b>CSMT</b>				
I-002	Cloverleaf Integration Engine Pilot	50%	12/ 4/2000	
I-006	Cache' conversion from MSM: Project Plan and Pilot Site	42%	8/ 1/2000	
I-012	Windows 2000 Migration	10%	10/ 2/2000	
<b>HQ</b>				
O-004	IHS FY02 Information Technology Architecture (ITA)	40%	2/ 1/2001	
I-005	Public Key Infrastructure (PKI) Pilot and Evaluation	20%	10/ 2/2000	
<b>IHS Area</b>				
I-078	VistAion Technology Transfer Prototype	20%	4/11/2001	
<b>ITSC</b>				
O-019	IHS Information Technology Conference	50%	12/ 4/2000	
O-026	GPRA Data Quality Initiatives	28%	10/ 2/2000	
O-027	Diabetes Data Projects	25%	10/ 2/2000	
O-025	Data Quality Action Team (DQAT)	4%	3/15/2001	
<b>SDST</b>				
O-031	Self-determination Negotiators Guide	90%	1/ 1/2001	9/30/2001
O-001	IHS IT Marketing/Communication Plan	10%	10/ 2/2000	
<b>TMT</b>				
I-045	Banyan Elimination Plan and Implementation	99%	10/ 2/2000	
I-038	Virtual Private Network (VPN) Installation	85%		
I-041	FTS Conversion from 2000 to 2001	82%	11/ 1/2000	
I-040	X.25 Elimination Plan	78%	10/ 2/2000	
I-050	Network Security Software Implementation	65%	4/11/2001	
I-036	Wide-Area Network Backup System	52%	10/ 2/2000	
I-080	PIX 515 Firewall Installations – Area Offices	29%	4/11/2001	
I-082	ETrust Intrusion Detection Software Upgrade: URL Blocking Component	25%	5/15/2001	
I-081	Norton Antivirus Mail Gateway Non-Exchange Server	12%	4/15/2001	

ID#	Project	% Compl.	Date Started	Date Completed
I-083	Phase Configuration ETrust Intrusion Detection: Other Components Installation and	2%		
<b>Ongoing (Operations &amp; Maintenance)</b>				
<b>ASDS</b>				
A-048	RPMS Application Ongoing Support	67%	10/ 2/2000	
I-072	VHA Initiatives Monitoring	67%	10/ 2/2000	
<b>ASDS-NPIRS</b>				
A-067	NPIRS FY01 Historic Report/Data Requests	67%	10/ 2/2000	
A-068	NPIRS FY01 Production Tasks	67%	10/ 2/2000	
A-071	NPIRS FY01 Web Reports	67%	10/ 2/2000	
I-059	OPH SAS Program Support	67%	10/ 2/2000	
<b>ASDS-Web</b>				
A-081	Web FY01 Ad Hoc Application and Site Enhancements	67%	10/ 2/2000	
<b>ITSC</b>				
O-020	ITSC Project Planning and Tracking Activities	67%	10/ 2/2000	
A-056	ITSC Training Program	67%	10/ 2/2000	
O-029	ORYX Maintenance	67%	10/ 2/2000	
O-028	RPMS Ad Hoc Data Analysis Requests	67%	10/ 2/2000	
<b>TMT</b>				
I-024	Internet/Intranet Services Operation and Maintenance	67%	10/ 2/2000	
I-054	VA Connectivity Liaison	67%	10/ 2/2000	
I-052	Wan/LAN/OA/Servers Maintenance and Troubleshooting	67%	10/ 2/2000	
<b>Funding Needed</b>				
<b>ASDS</b>				
A-017	Immunizations Information Exchange Support	1%	11/ 1/2000	
A-012	WebTop Beta and Deployment	1%	3/13/2001	
<b>On Hold</b>				
<b>ASDS</b>				
A-041	Administrative Resource Management System (ARMS) Open Document Update	80%	10/ 1/1998	2/ 9/2001
A-044	Supply Accounting Management System (SAMS) Certification	75%	9/ 1/2000	
A-047	National Drug File (NDF) V. 4.0 Distribution	50%	10/ 2/2000	
A-051	Adverse Reactions Tracking V. 4.0	50%	10/ 2/2000	
A-049	Inpatient Medications v. 4.0/4.5 Deployment	50%	10/ 2/2000	

ID#	Project	% Compl.	Date Started	Date Completed
A-054	Third Party Billing V. 3.0 Redesign	50%	10/ 2/2000	
R-025	GCPR Framework Pilot IHS Implementation Activities	50%	10/ 2/2000	
R-002	GCPR Program Level Support	40%	10/ 2/2000	
A-109	Pharmacy Data Management (PDM)	35%	12/12/2000	
A-084	AIB Modifications	5%		
<b>ASDS-NPIRS</b>				
A-060	Standard Code Book (SCB) Table Updates/Modifications via Intranet	80%	10/ 2/2000	
A-101	PVCS Tracker and Version Manager Upgrade and Enhancement	35%	10/ 2/2000	
A-073	NPIRS Web Data Sets	15%	8/ 1/2000	
<b>ASDS-Web</b>				
A-078	Web-based IHS Work Order System	55%	4/ 3/2000	
A-020	Project Management Web-based COTS Evaluation and Implementation	25%	11/ 1/2000	
A-023	ITSC Resource Schedule Center Enhancements Phase II	10%	10/ 2/2000	
A-106	Job Vacancies Database Phase II	5%	1/25/2001	
<b>ITSC</b>				
O-032	Data Management Workgroup	10%	12/15/2000	
<b>TMT</b>				
I-055	Terminal Server Replacement Evaluation (RPMS Hardware)	80%		
I-044	Cache Flow Server Implementation	50%		
I-029	Implement Multi-Media Streaming Server	10%	3/19/2001	
<b>Not Started</b>				
<b>ASDS</b>				
A-040	Administrative Resource Management System (ARMS) DHR Database Redesign & Consolidation	0%		
A-005	Ambulatory Payment Class/Group (APC/APG) Migration Plan	0%		
A-034	ARMS and CHS CORE Header Format Update	0%		
A-033	Contract Health System (CHS) Data Enhancements	0%		
A-030	Contract Health System (CHS) Interest Accrual Enhancement	0%		
A-029	Contract Health System (CHS) Master Delivery Order List (MDOL) Enhancements	0%		
A-028	Contract Health System (CHS) Purchase Order Enhancement	0%		
O-030	ITSC Customer Service and User Policies & Procedures	0%		
A-010	Lab Package Interface to Reference Labs	0%		

ID#	Project	% Compl.	Date Started	Date Completed
A-019	Lab Package Reference Range Development	0%		
A-011	LOINC IHS-wide Deployment Planning	0%		
A-087	Nursing Modifications	0%		
A-009	RPMS Growth Plan Integrated Implementation Plan	0%		
I-011	SQL Interface Evaluation and Implementation Plan	0%		
A-045	Supply Accounting Management System (SAMS) Interface Enhancements	0%		
A-016	VA Application Patch Evaluation and Implementation Plan	0%		
<b>ASDS-NPIRS</b>				
I-062	CORE Reports	0%		
I-070	HACMP Implementation	0%		
I-069	National Interface Clearinghouse	0%		
A-061	Registration Information Inquiry/ Update Screens	0%		
A-058	User Population Report 1999 Verification	0%		
<b>CSMT</b>				
yy	Cloverleaf Integration Engine Deployment	0%		
I-009	Generic Interface System (GIS) IHS Deployment	0%		
I-030	Kernel 8 Security Options Part 3 Implementation	0%		
I-053	Seat Management Evaluation and Recommendation for Sites	0%		
A-015	Verification Gold Version UCIs	0%		
<b>ITSC</b>				
O-022	Evaluation of Clinical Impact of RPMS	1%	3/ 1/2001	
O-014	IHS IT Outsourcing Review and Recommendation	0%		
O-024	Medicare Measures Project	0%		
I-056	Software Implementation Response (SIRT) Team	0%		
<b>TMT</b>				
I-046	Disaster Recovery Plan for Servers	0%		
O-016	E-Mail Management and Etiquette	0%		
I-042	Fax Server Implementation Phase II	0%		
I-039	IHS WAN Support of ATM Voice and Video	0%		
I-066	Network Intrusion Monitoring	0%		
I-010	Public Key Infrastructure (PKI) Deployment Plan and Implementation	0%		
R-023	Wireless Point of Care Evaluation and Recommendation	0%		



Lead Department:

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ASDS

Application Software  
Development and  
Support Team

**Accounts Receivable (A/R) Debt Collection Package (Transworld) # A-038****Project Category:** Applications Patient Administrative **FY01 Project Type:** New**Contact:** Pike, Michael**Sponsor:** BOAT

The purpose of this project is to develop new functionality for the Accounts Receivable package that will export outstanding accounts receivables to Transworld debt collection agency for collection. After successful collection, Transworld will transfer the monies to IHS who then closes the respective claims. This new functionality will allow sites to set up the automatic export process.

**Current Status:** In Testing **% Complete:** 83%**Actual Begin Date:** 01-Mar-00 **Estimated Duration:** 4 Months**Staffed By:** Outsourced**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
1	Sr Programmer	50.00%	4	304 Hours
1	Project Lead	10.00%	4	61 Hours
1	Jr Technical Writer	15.00%	1	23 Hours
1	Verifier	10.00%	1	15 Hours
<b>Totals: 4 Staff</b>				<b>403 Hours</b>

**ITSC FY01 Priority:** 2 - High**Justification****ITA:** ☐ **RPMS Growth Plan:** ☐**ISAC Goals:** 01 Billing**Legislative Drivers:**

This effort will provide a means of submitting delinquent third party bills to an outside collector for reimbursement.

**Task Description**

1. Clarify requirements for new functionality.
2. Design code requirements to implement functionality.
3. Program the functionality.
4. Perform integration testing with standard packages/software.
5. Perform testing with Transworld to verify export process.
5. Modify documentation.
6. Assemble for verification and testing.
7. Alpha and beta test, fix and modify as necessary, release.

**Background**

The Department of Veterans Affairs had developed software to link VistA with Transworld. The IHS will modify this software to allow for RPMS to send data to Transworld. This software will be threshold driven in connection with the A/R package. When a bill is outstanding over a certain number of days and a specified dollar amount (e.g. aged over 90 days and claim is over \$1,000) then the software sends a message to with all relevant data to Transworld. They will work the outstanding debt for less than five dollars/claim.

**Accounts Receivable (A/R) V.1.5 Reports Generation**

# A-052

**Project Category:** Applications Financial & Admin**FY01 Project Type:** Enhancement**Contact:** Lujan, Shirley**Sponsor:** BOAT

This project consists of developing additional, necessary reports for the A/R package including the following:

1. Aging Management Report aging outstanding claims by generation date.
2. Transaction Report tracking previous postings, with multiple sorting options and detail or summary form.
3. Adjustment Detail Report listing all adjustments, with multiple sorting options and totals.
4. Period Summary Report listing all transactions during the last 30 days, with amounts opened and closed and sorting options.
5. Large Balance Report listing all amounts received that were greater than a designated amount.

This version will also include itemized and/or summarized patient statements.

**Current Status: Completed**      **% Complete:** 100%**Actual Begin Date:** 02-Oct-00      **Estimated Duration:** 3 Months      **Date Complete** 06-Jun-01**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
1	Jr Programmer	100.00%	3	456 Hours
1	Sr Technical Writer	25.00%	1	38 Hours
1	Verifier	10.00%	1	15 Hours
<b>Totals: 3 Staff</b>				<b>509 Hours</b>

**ITSC FY01 Priority:** 2 - High**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 01 Billing**Legislative Drivers:**

There are very few reports in the A/R System. Users are expected to generate new reports using FILEMAN which is difficult for most users not familiar with this utility.

**Task Description**

1. Clarify specific report requirements for sorting options and criteria.
2. Design and make code modifications.
3. Test new reports in house and verify with the SAC.
4. Conduct beta testing, make revisions as necessary and release.

**Accounts Receivable (A/R) V.1.6 AHCCCS ERA**# **A-105****Project Category:** Applications Financial & Admin**FY01 Project Type:** Enhancement**Contact:** Lujan, Shirley**Sponsor:** Phoenix

Version 1.6 of the A/R package includes automated payment posting by processing ANSI 835 explanation of benefits files. It includes new menu options to post an Electronic Remittance Advice (ERA) from AHCCCS, to import ERAs from AHCCCS into the RPMS system, to review information in the Medicare file for correctness, to review “postable” claims, to post payments and adjustments, to report bills from the Medicare file and their status, and to delete the Medicare file after it has been imported to RPMS.

**Current Status:** In Testing      **% Complete:** 82%**Actual Begin Date:** 08-Feb-01      **Estimated Duration:** 5 Months**Staffed By:** Outsourced**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
1	Project Lead	5.00%	5	38 Hours
1	Jr Technical Writer	25.00%	1	38 Hours
1	Verifier	10.00%	1	15 Hours
<b>Totals: 3 Staff</b>				<b>91 Hours</b>

**Other Direct Costs (ODCs) Estimate**

<u>ODC Category</u>	<u>Description</u>	<u>Total Cost</u>
Contractor Services	Contractor	\$0
<b>Total:</b>		<b>\$0</b>

**ITSC FY01 Priority:** 2 - High**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 01 Billing**Legislative Drivers:**

**Administrative Resource Management System (ARMS) Certification # A-039****Project Category:** Applications Financial & Admin **FY01 Project Type:** Continuation**Contact:** Fugatt, Anne

The Administrative Resource Patient Management (ARMS) software needs to be standardized across all areas to facilitate management and support. Many Areas are running different variations of the ARMS and Finance software in that modifications have been made at one Area and not at another. This presents a maintenance and support problem as these variations behave somewhat differently or unexpectedly from one Area to another. This situation makes it virtually impossible to create patches to correct problems. Because of the many difficulties inherent in the software, old non-used software, and changing business practices, many portions of the software need to be rewritten. ARMS, AO Financial Data Mgmt System and 1166 Approvals For Payment software have become extremely integrated and co-dependent on each other. ARMS has absorbed much of the 1166 functionality. The three software packages have independently developed what have become redundant databases and functionality. These need to be merged with ARMS to promote efficiency and ease of handling. Old obsolete routines, options, databases, etc., need to be identified and deleted.

**Current Status: In Progress**      **% Complete:**      66%**Actual Begin Date:** 03-Jul-00      **Estimated Duration:**      8 Months**Staffed By:**      In House**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
1	Sr Programmer	100.00%	7.5	1,140 Hours
1	Sr Technical Writer	100.00%	3	456 Hours
1	Verifier	100.00%	1	152 Hours
<b>Totals: 3 Staff</b>				<b>1,748 Hours</b>

**ITSC FY01 Priority:**    2 - High**Justification****ITA:**    ☐    **RPMS Growth Plan:**    ☐**ISAC Goals:** 13    Administrative Enviroment      **Legislative Drivers:****Task Description**

Standardize ARMS Across all Areas

1. Evaluate all software and databases across all Areas to determine a "gold standard" software set.
2. Create a "gold standard" software set to be distributed to all Areas. Determine the locations that are up-to-date so that set can be used.
3. Distribute and implement the software set at all Areas.

Stabilize ARMS Software.

1. Identify and evaluate redundant databases to determine how to merge them. Identify obsolete software. Redesign software for efficiency.
2. Write conversion routines to merge databases and resolve pointers. Modify routines to reference

the proper databases. Rewrite routines to make them function more efficiently. Delete old non-used routines, options, databases, etc.

3. Release the modified software for beta testing.
4. Release to field for implementation.

Adhere to Standards and Conventions (SAC).

1. Evaluate and identify SAC violations and determine how to eliminate them.
2. Development. Modify routines and databases as necessary to eliminate SAC violations.
3. Pre-release Testing. Release the modified software for beta testing.
4. Release to the field for implementation.

Write User and Technical Documentation.

**Administrative Resource Management System (ARMS) DHR  
Database Redesign & Consolidation**

# A-040

**Project Category:** Applications Financial & Admin **FY01 Project Type:** Continuation**Contact:** Fugatt, Anne

Redundant databases resulted from the merger of the ARMS 1166 Approvals for Payments and the AO Financial Data Management System software packages. The databases containing DHR data need to be consolidated for efficiency and ease of handling. Also, no historical record of payment and obligation batch transmissions to HAS/CORE is being kept. Additionally, no record whatsoever of manual DHR data entry is being kept. This makes it extremely difficult to recover DHR records for retransmission in the event of a transmission failure and at times causes data entry clerks to have to re-enter large amounts transaction data for retransmission. The redesign and consolidation of these databases should also include transmission history data.

**Current Status:** Not Started **% Complete:** 0%**Actual Begin Date:** **Estimated Duration:** 8 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
1	Sr Programmer	100.00%	7.5	1,140 Hours
Totals: 1 Staff				1,140 Hours

**ITSC FY01 Priority:** 3 - Medium**Justification****ITA:** ☐ **RPMS Growth Plan:** ☐**ISAC Goals:** 13 Administrative Environment **Legislative Drivers:**

This effort will consolidate redundant databases, provide an historical record of obligation and payment batch transmissions to CORE, and aid in the recovery of transmission failure or accidental batch deletion.

**Task Description**

1. Pre-development evaluation, planning and design. Evaluate the existing databases to determine which database elements to merge and how to handle pointers to the databases. Design a new database or restructure an existing database to contain the merged data and include transmission history data. Design conversion routines as necessary to merge these databases and resolve pointers. Design an interface to enter data into the database and retrieve data from it. Evaluate software such as routines and other databases which reference these DHR databases to determine which modifications need to be made to reference the new database, add transmission history data, and where to add hooks into the interface routines.
2. Development. Add/delete fields as necessary to the DHR database. Write conversion routines to merge databases and repoint pointers. Write interface routines to access the database. Modify existing M routines to reference the new database or add hooks into the interface routines. Delete the obsolete databases.

3. Pre-release testing. Release the modified software via an ARMS patch to beta test sites.
4. Release and implementation. Upon completion of beta testing, release to the field for implementation.



**Administrative Resource Management System (ARMS) Open Document Update**

# A-041

**Project Category:** Applications Financial & Admin **FY01 Project Type:** Continuation**Contact:** Fugatt, Anne

This project adds to ARMS the process of updating the Open Document file with obligations. The Open Document file is used as a commitment register, updated with obligation transactions as they were processed under the obsolete 1166 Approvals For payment software. When ARMS took over the obligation and payment processing, the process of updating the Open Document file with obligations was not included.

**Current Status:** On Hold **% Complete:** 80%

Placed in on-hold status 3/23/01 to be rolled into V2.0 for beta. This functionality will not be incorporated until direct input requested from CORE is received. Moved modifications to V2.1T1. (see #A-039 ARMS Certification)

**Actual Begin Date:** 01-Oct-98 **Estimated Duration:** 8 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
1	Sr Programmer	100.00%	7.5	1,140 Hours
<b>Totals: 1 Staff</b>				<b>1,140 Hours</b>

**ITSC FY01 Priority:** 4 - Low**Justification****ITA:** ☐ **RPMS Growth Plan:** ☐**ISAC Goals:** 13 Administrative Environment **Legislative Drivers:**

This effort will provide an accurate commitment register of obligation transactions against which to post payment transactions.

**Task Description**

1. Pre-development evaluation, planning and design. Evaluate the current software and database set to determine at which point the data is available for use in updating the Open Document file. Design a generic interface to the Open Document file which can be used by the obligation update function as well as the posting of payment transactions and upload of the CORE open document data to the Open Document file.
2. Development. Add new fields as necessary to the Open Document file. Write interface routines to update the Open Document file with obligation and payment transactions. Insert hooks from the current software to the interface.
3. Pre-release testing. Release the modified software via an ARMS patch to beta test sites.
4. Release and implementation. Upon completion of beta testing, release to the field for implementation.

**Administrative Resource Management System (ARMS) Travel  
Advance Form Automation**

# A-037

**Project Category:** Applications Financial & Admin **FY01 Project Type:** Enhancement**Contact:** Fugatt, Anne

The Travel Advance form SF1038 needs to be automated in ARMS to provide a means of entering and tracking travel advances and provide a printed form. This will make this an official process in ARMS which can be implemented across all Areas. Since policy and guidelines will be set for the use of automated travel advances, the problems with the current travel advance procedures in ARMS can be resolved.

**Current Status:** In Progress **% Complete:** 60%**Actual Begin Date:** 01-Sep-00 **Estimated Duration:** 8 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
1	Sr Programmer	100.00%	7.5	1,140 Hours
1	Verifier	100.00%	1	152 Hours
<b>Totals: 2 Staff</b>				<b>1,292 Hours</b>

**ITSC FY01 Priority:** 4 - Low**Justification****ITA:** ☐ **RPMS Growth Plan:** ☐**ISAC Goals:** 13 Administrative Environment **Legislative Drivers:**

This effort will resolve the problems with the current travel advance procedures in ARMS.

**Task Description**

1. Analyze the current procedure for capturing travel advance data in ARMS. Determine what if any additional data needs to be captured.
2. Design and program the Travel Advance Form. Write ARMS interface to the form.
3. Beta test travel advance software at Area level.
4. Verify the travel advance software.
5. Release and implement the software.

**Adverse Reactions Tracking V. 4.0**

# A-051

**Project Category:** Applications Clinical**FY01 Project Type:** Continuation**Contact:** Moore, Edgar

The goal of this project is to make V.4.0 of the Adverse Reaction Tracking software package available for general distribution to all IHS pharmacy customers. This package is listed as a VA prerequisite for Version 4.0 of the National Drug File software package, PIMS V. 5.3, and the Pharmacy upgrade.

**Current Status: On Hold**      **% Complete:** 50%

1/4/01: This project has been put on hold until after the Pharmacy Point of Sale (POS) is released.

**Actual Begin Date:** 02-Oct-00      **Estimated Duration:** 8 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
1	Jr Programmer	100.00%	7.5	1,140 Hours
1	Sr Programmer	100.00%	7.5	1,140 Hours
<b>Totals: 2 Staff</b>				<b>2,280 Hours</b>

**ITSC FY01 Priority:** 3 - Medium**Justification****ITA:** ☐      **RPMS Growth Plan:** ☒**ISAC Goals:** 09 Decision Support**Legislative Drivers:**

The ART V4.0 upgrade is needed to provide IHS facilities with the latest VA allergy tracking software. This is in keeping with the decision to align IHS packages with their most current VHA equivalents.

**Task Description**

1. Environment Creation at HQW for Adverse Reaction Tracking V4.0. Create a new partition/UCI large enough to hold version 4.0 and all supporting software on the HQW system. This will include identification of all software packages required to run Adverse Reaction Tracking (ART) V4.0, determination of space requirements, creation of UCI, and installation of supporting software into the new environment. Installation of the GMRA\*3\*13 patch is required if the new environment is established with a lesser version of the ART, or Allergy Tracking, software. Running of the GMRP\*2.5\*32 patch is required for the Progress Notes software package. In addition, access and security for the environment and software packages will need to be established.

2. Installation of Version 4.0 on HQW system. All VA patches for the VA version of Adverse Reaction Tracking V4.0 need to be identified, reviewed, and when appropriate, readied for installation. Review and verify that all mandatory files needed to run Adverse Reaction Tracking are available. Install and configure V4.0 on the ASDST system. This includes, but is not limited to, backing up of the current environment, securing access to the system, initializing the environment, restoration of the routines, files, and documentation to the system, installation of appropriate patches,

as well as establishing the proper security and access following the completion of the restoration. In addition, required background jobs will need to be initiated, journaling for the ^GMR global needs to be accomplished and translation of the ^GMR and ^GMRD globals needs to be done if multiple CPUs are used.

3. Clinical Programming Team Testing and Verification of Adverse Reaction Tracking V4.0. Verify that all options are functioning properly for Adverse Reaction Tracking V4.0 in the environment established. Verify that the documentation matches the performance of the software, including all interactions that take place with all files and routines outside of Adverse Reaction Tracking V4.0. Document, resolve and re-test any discrepancies identified.

4. Pharmacist/Customer/PSG Testing on HQW system. Customer/Pharmacist/PSG testing of Adverse Reaction Tracking needs to be done on the HQW system to insure that needed functionality is available prior to Alpha release. Monitor and document all identified problems, or lacking functionality. Resolve, re-test and re-package enhancements/fixes for all identified issues. Obtain certification from testers that software is ready to move on to Alpha testing.

5. Identify and Release Software to Alpha Test Site(s). Install V4.0 of the Adverse Reaction Tracking package, including all pre-requisite software, to the alpha system(s). Distribute documentation to all those who will be working with and testing the software on the Alpha System, in addition to providing training if needed. Monitor and document all identified problems. Resolve, re-test, re-package and install fixes for all identified problems. Obtain certification from testers that software is ready to move on to a Beta testing classification.

**AIB Modifications**

# A-084

**Project Category:** Applications General**FY01 Project Type:** Enhancement**Contact:** Cordova, Carlos

This project will prepare AIB for certification. It includes adding the year to Julian date tag; creating a utility to check old files and replace the Julian date; and adding flexibility so users can choose their own directory in which to store files.

Old files Julian date is the same as new files Julian date. Areas want to use other directories/files to store backup files. Certification is needed to ensure standards compatibility. These modifications support improved data movement and data quality.

**Current Status:** On Hold      **% Complete:** 5%

112/20/00: On Hold

**Actual Begin Date:**      **Estimated Duration:** 5 Months**Staffed By:****Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
1	Sr Programmer	100.00%	5	760 Hours
1	Verifier	100.00%	1	152 Hours
<b>Totals: 2 Staff</b>				<b>912 Hours</b>

**ITSC FY01 Priority:** 3 - Medium**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 02 Interoperability**Legislative Drivers:**

The old files Julian date is the same as the new files Julian date. The Areas was to use other directories/files to store backup files. Certification is needed to ensure the package is in compliance with the SAC standards.

**Task Description**

1. Certify software.
2. Modify code to add the year to the julian date tag.
3. Create a utility to modify the julian date tag for old/previous files.
4. Add flexibility for the Areas to choose the directory.

**Ambulatory Payment Class/Group (APC/APG) Migration Plan** # **A-005****Project Category:** Applications Financial & Admin **FY01 Project Type:** New**Contact:** Gonzales, Arthur

HCFA Ambulatory Payment Classes (APCs) and Ambulatory Payment Groups (APGs), based on procedure codes, now require itemizing of Medicare claims for outpatient visits. IHS has been billing outpatient visits at a flat rate via the Third Party Billing (3PB) package using data and coding from the Primary Care Component (PCC). These packages are already capable of itemizing claims, so programming modifications would include only minimal changes to the PCC by way of an additional file or a new separate component and consistency checking in both packages. The largest effort would need to be made by the site data entry people where additional training would be necessary.

This request is included in the event the migration to itemizing is deemed necessary.

**Current Status:** Not Started **% Complete:** 0%**Actual Begin Date:** **Estimated Duration:** 12 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
1	Project Lead	10.00%	1	15 Hours
<b>Totals: 1 Staff</b>				<b>15 Hours</b>

**ITSC FY01 Priority:** 2 - High**Justification****ITA:** ☐ **RPMS Growth Plan:** ☐**ISAC Goals:** 01 Billing**Legislative Drivers:** HCFA

If discussions between HCFA and IHS result in the need to itemize Medicare claims for outpatient visits, this project will be necessary to meet that requirement.

**Task Description**

1. Determine what programming modifications are necessary to the 3PB and PCC packages to produce itemized outpatient Medicare claims and any necessary consistency checking.
2. Develop and deliver additional training for PCC data entry personnel to support claim itemizing.
3. Coordinate modifications made to the packages with ongoing programming, interfacing, or testing activities involving those packages (e.g., the interface to the 3M system).

**Comments**

This project has to be completed by July FY03 or thereafter, to be determined. HCFA will work on a plan for IHS. Actual deployment is a low priority for FY01, but the plan for moving forward needs to be developed.

**Annual CPT File Update**# **A-104*****Project Category:*** Applications General***FY01 Project Type:*** Enhancement***Contact:*** Jackson, Don

This project consists of preparing and distributing year 2001 CPT codes to the field.

**Current Status:** Completed      **% Complete:** 100%**Actual Begin Date:** 06-Dec-00      **Estimated Duration:** 1 Months      **Date Complete** 29-Dec-00**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements****ITSC FY01 Priority:** 1 - Required**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 01 Billing**Legislative Drivers:**

**ARMS and CHS CORE Header Format Update**

# A-034

**Project Category:** Applications Patient Administrative **FY01 Project Type:** Enhancement**Contact:** Fugatt, Anne**Sponsor:** CORE

This project will update the CHS and ARMS header record format to comply with the CORE 650 character requirement. To meet the CORE requirement, ITSC has been sending this header record in two pieces and CORE has been manually merging the two headers. CORE has now sent specifications for the 650-character header. This project will meet those specifications. There are two difficulties: Testing with CORE and the need to add a setup switch to the software that can be set at each Area so that all Areas can schedule to begin sending the 650-character header at the same time on a given date.

**Current Status:** Not Started **% Complete:** 0%**Actual Begin Date:** **Estimated Duration:** 3 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
1	Sr Programmer	100.00%	3	456 Hours
<b>Totals: 1 Staff</b>				<b>456 Hours</b>

**ITSC FY01 Priority:** 1 - Required**Justification****ITA:** ☐ **RPMS Growth Plan:** ☐**ISAC Goals:** 98 Legislated**Legislative Drivers:** CORE

This project is required in order to comply with CORE requirements. CORE changed their record formats over a year ago and asked for compliance by August 1999.

**Task Description**

1. Software design and development according to the CORE specifications.
2. Test software functionality inhouse.
3. Test new software live with CORE. Coordinating this effort with CORE is where the bulk of the time will be used because the work involves several unknowns and will entail scheduling difficulties.



**Automated Sentinel Surveillance Pilot**# **A-108****Project Category:** Research & Development**FY01 Project Type:** New**Contact:** Moore, Catherine**Sponsor:** IHS Epi/CDC Consorti

The IHS Epidemiology program is working with the Center for Disease Control (CDC) to pilot an automated, "pseudo" real-time sentinel surveillance system at 2-5 IHS sites where patient lab data is standardized via mapping to the LOINC coding system. IHS will collect and export lab data to the CDC, which receives the data into a central repository and performs data analysis and reporting. This will allow IHS to provide data on reportable diseases to appropriate public health authorities in a more cost-effective, timely, and accurate manner. Funding and the bulk of staff resources for this project will be provided by those programs. ITSC is providing technical advice and support, using in-house resources. The pilot will determine for all participants the pros and cons of this partnering approach to data monitoring.

**Current Status: In Progress**      **% Complete:** 5%**Actual Begin Date:** 01-Feb-01      **Estimated Duration:** 6 Months**Staffed By:** Both**Estimated InHouse FY01 Staffing Requirements**

#	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
1	Project Lead	15.00%	7	160 Hours
1	Jr Systems Analyst	25.00%	7	266 Hours
<b>Totals: 2 Staff</b>				<b>426 Hours</b>

**Other Direct Costs (ODCs) Estimate**

<u>ODC Category</u>	<u>Description</u>	<u>Total Cost</u>
Contractor Services	Cimarron Medical Informatics and Cereplex (cost TBD)	\$0
<b>Total:</b>		<b>\$0</b>

**ITSC FY01 Priority:** 2 - High**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 10      **Comparability of Public Health**      **Legislative Drivers:**

This project is being done to improve the cost-effectiveness, timeliness, and accuracy of its reportable disease reporting to appropriate public health authorities. This project will provide information about the effectiveness of the surveillance approach, as well as more practical experience to the LOINC mapping effort.

**Task Description**

1. Map local lab files to LOINC at 1-5 sites (Cimarron). Develop a generalizable process. Create a program to download the entire lab test files from selected facilities to a central site, automate the identification and elimination of duplicates, manually code each of the unique test names to LOINC, save those mappings so that future downloads from additional sites can automatically be mapped to the extent that test names are now already known, while "new" names can be manually mapped and

added to the program, automatically return the mapped lab test files to the originating sites for incorporation in their local system.

2. Patch RPMS Lab Package and PCC, and then program an application to export appropriate data to a central site in a standard flat file format. (Cimarron)

a. Patch RPMS Lab Package (using VA patch or creating our own) to add LOINC fields to lab records.

b. Patch PCC to accept LOINC codes.

c. Develop the export program. There are varying possible scopes for this component. For example, this component's functionality could vary as follows with commensurate variations in developmental costs:

i) Limited – One simple export program that would export a pre-selected list of current lab tests at pre-set intervals to one central site.

ii) More flexible – modifiable list of exported LOINC codes to more readily accommodate inevitable future additions and deletions.

iii) Much more flexible – modifiable dates of visit to export, e.g. exporting 3 years data on a new element to allow immediate analysis of trends without having to re-program.

3. Oversee the data export process, checking for incomplete data, communicating with sites so that they can correct erroneous or missing data before final export, re-exporting corrected data, sending final "clean" data to a central site. (Cimarron)

4. Collect and store data, including setting up the database structure. (Cerplex) Once again, there are varying possible scopes for this component. One could just create a simple repository that only stores the data "as is." Alternatively one could add components to analyze the data for errors and "clean" it, analyze data to see if non-numeric test results can be automatically processed, make it Web accessible, analyze data to see if non-numeric test results can be automatically processed, design predetermined Web accessible reports, create a flexible Web-based ad-hoc query system, etc. Costs will vary commensurately.

## **Comments**

Funding available from IHS Epi/CDC Consortium. The IHS Epidemiology Program and CDC have not yet defined the specifics of their project. The project will start as soon as they finalize the funding and contracting issues. It is anticipated that ITSC will provide technical assistance when they start and for the duration they ultimately designate.

The contractor support indicated under Estimated Labor will need to be someone familiar with the LOINC coding system and the mapping process.

**Average Wholesale Price (AWP) Quarterly Update**

# A-050

**Project Category:** Applications Clinical**FY01 Project Type:** Operations & Maintenance**Contact:** Moore, Edgar

The goal of this project is to make the quarterly Average Wholesale Price (AWP) updates from First Data Bank available for general distribution in a timely manner for all IHS pharmacy customers. These releases are needed to insure that accurate tracking of drug costs occur, while increasing the chances of proper reimbursement from 3rd party payers.

**Current Status:** In Progress      **% Complete:** 67%**Actual Begin Date:** 02-Oct-00      **Estimated Duration:** 12 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
1	Jr Programmer	100.00%	3	456 Hours
1	Sr Programmer	100.00%	3	456 Hours
<b>Totals: 2 Staff</b>				<b>912 Hours</b>

**ITSC FY01 Priority:** 2 - High**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 01 Billing**Legislative Drivers:**

The AWP is an important component used in IHS for the purpose of revenue generation and 3rd Party Billing of outpatient medications.

**Task Description**

- Several steps are involved when processing the First Databank CD containing the AWP including:
  - File Transfer from First Databank CD to a UNIX file
  - Rename all "MED" files to Lowercase
  - Run processing program that extracts AWP data from several Med files
  - Note file modification
  - Global save and restore to a different UCI for testing
  - Forward AWP to a test site
  - Patch Module update
  - Forward to Verification for release
- Several modifications have been requested by the Pharmacy PSG that involve the way we handle the AWP data. Most changes will be done in the Outpatient Patient package and will be included in future patch releases.

**CDC Immunization Data Exchange Pilot**

# I-073

**Project Category:** Infrastructure General**FY01 Project Type:** New**Contact:** Huggins, George**Sponsor:** CDC

The purpose of the CDC Immunization Data Exchange program is to provide a mechanism and a methodology for updates done and recorded in one regional registry to be sent to other appropriate registries, and to provide for queries to be done in other registries. Original proposed participants for the pilot with CDC were Utah, Arizona, Oklahoma and the Indian Health Service. The pilot will utilize an HL7 architecture and software; IHS may need to modify its HL7 architecture in order to participate.

**Current Status:** In Progress      **% Complete:** 3%

Technical progress is stalled for lack of funds.

**Actual Begin Date:** 02-Feb-01      **Estimated Duration:** 6 Months**Staffed By:** Both**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
1	Project Lead	5.00%	6	46 Hours
<b>Totals: 1 Staff</b>				<b>46 Hours</b>

**Other Direct Costs (ODCs) Estimate**

ODC Category	Description	Total Cost
Contractor Services	Cimarron Medical Informatics (TBD)	\$0
<b>Total:</b>		<b>\$0</b>

**ITSC FY01 Priority:** 2 - High**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 02 Interoperability  
98 Legislated**Legislative Drivers:** GPEA**Background**

The initial pilot will use Windows 2000. The port to Unix will be done after the code has been tested and utilized. It will require a dedicated machine with a fixed IP address and constant Internet connection. A training session is proposed during July at the immunization registry conference in Little Rock, AR.

**Comments**

To be partially supported by CMI task order for HL7 support and maintenance (see #A-013). CDC contact is Susan Abernathy, National Immunization Program.

**Contract Health System (CHS) Data Enhancements**

# A-033

**Project Category:** Applications Patient Administrative **FY01 Project Type:** Enhancement**Contact:** Friedland, Paul**Sponsor:** CHS WG, FI

This project will enhance the way the Contract Health Management Information System package handles and reports data transmission with the goal of increasing accountability and accuracy of data transmission.

The database does not keep track of enough basic statistics. This project calls for improving the software and documentation to make it possible to tell what POs have been processed/forwarded, what's been paid, how much, and when. Some reports contain information on what has been sent that is not accurate; other reports require someone to perform manual calculations. For instance, only the number of records sent is recorded, not what those records were, and not any information about those records and their contents (e.g., what providers, etc.).

The process of exporting data from the facilities to the Areas, then transmitting the data from the Areas to the FI and CORE needs to be more stable, robust, and easier to use, understand, and support. Currently this process requires a great deal of developer time to support. The software doesn't capture anything about the data it sends so that any specific data collection and interpretation must be performed manually. If an error occurs during transmission, the process cannot start up from where the error occurred, it has to be begun again from the beginning. Any indication of the error(s) that occurred is overwritten by the restarted process.

**Current Status:** Not Started **% Complete:** 0%**Actual Begin Date:** **Estimated Duration:** 8 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
3	Sr Programmer	100.00%	8	3,648 Hours
1	Sr Technical Writer	100.00%	4	608 Hours
1	Verifier	100.00%	2	304 Hours
<b>Totals: 5 Staff</b>				<b>4,560 Hours</b>

**ITSC FY01 Priority:** 2 - High**Justification****ITA:** ☐ **RPMS Growth Plan:** ☐**ISAC Goals:** 01 Billing  
13 Administrative Environment**Legislative Drivers:**

The PSG and the FI have requested improvement in the basis statistics the database tracks and provides to users. This development effort will also make it easier to resend data and the users require it.

**Task Description**

1. Statistics tracking and provision involves modifying the following reports:

- Regular reports
- CHEF reports
- Export/transmit reports
- New reports

Improving data transmission involves the following tasks:

1. Redesign the MUMPS software portion.
2. Rewrite and test MUMPS portion.
3. Redesign the Unix/NT portions of it.
4. Rewrite and test Unix/NT portions of it.
5. Document the process for the users, the support desk, future programmers, and administrative and supervisory staff.

### **Background**

The database does not keep track of enough basic statistics. This project calls for improving the software and documentation to make it possible to tell what POs have been processed/forwarded, what's been paid, how much, and when. Some reports contain information on what has been sent for a week that is not accurate; other reports require someone to perform manual calculations. For instance, only the number of records sent is recorded, not what those records were, and not any information about those records and their contents (e.g., what providers, etc.). This project has been requested by the PSG and the FI.

2. The process of exporting data from the facilities to the Areas, then transmitting the data from the Areas to the FI and CORE needs to be more stable, robust, and easier to use, understand, and support. Currently this process requires a great deal of developer time to support. The software doesn't capture anything about the data it sends so that any specific data collection and interpretation must be performed manually. If an error occurs during transmission, the process cannot start up from where the error occurred, it has to be begun again from the beginning. Any indication of the error(s) that occurred is overwritten by the restarted process. This development effort will also make it easier to resend data. The users require it; in fact, if this work isn't performed on CHS, the whole package is unnecessary.

**Contract Health System (CHS) Interest Accrual Enhancement**# **A-030****Project Category:** Applications Patient Administrative **FY01 Project Type:** Enhancement**Contact:** Friedland, Paul

This project will implement tracking of payment amounts in the Contract Health Management Information System package. Project staff will change the method by which CHS calculates interest as well as the timing of when interest accrues.

**Current Status:** Not Started **% Complete:** 0%**Actual Begin Date:** **Estimated Duration:** 2 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
1	Sr Programmer	100.00%	2	304 Hours
1	Sr Technical Writer	100.00%	1	152 Hours
1	Verifier	100.00%	1	152 Hours
<b>Totals: 3 Staff</b>				<b>608 Hours</b>

**ITSC FY01 Priority:** 1 - Required**Justification****ITA:** ☐ **RPMS Growth Plan:** ☐**ISAC Goals:** 01 Billing  
13 Administrative Enviroment  
98 Legislated**Legislative Drivers:** PPA

Currently dollars are not tracked efficiently in CHS. Amounts appear overspent at times and underspent at other times. Also, the law has changed as to when interest accrues. Tribes want interest calculated and collected on claims whose payments are delayed to and from the contract holder.

**Task Description**

1. Gather requirements with the workgroup to determine the formula for calculating the interest and the method for handling the interest collected on closed accounts, etc.
2. Design the approach and method to be used.
3. Develop the code.
4. Test functionality and verify it with the SAC.

**Contract Health System (CHS) Master Delivery Order List (MDOL) # A-029 Enhancements**

**Project Category:** Applications Patient Administrative **FY01 Project Type:** Enhancement

**Contact:** Friedland, Paul

**Sponsor:** CHS WG

The CHS Master Delivery Order List component has been developed and is now in alpha test at several facilities. This project will modify the component according to the recommendations of users at the alpha site who have indicated that some improvements be made before it is released nationally.

**Current Status:** Not Started **% Complete:** 0%

**Actual Begin Date:** **Estimated Duration:** 4 Months

**Staffed By:** In House

**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
1	Sr Programmer	100.00%	4	608 Hours
1	Sr Technical Writer	100.00%	2	304 Hours
1	Verifier	100.00%	1	152 Hours
<b>Totals: 3 Staff</b>				<b>1,064 Hours</b>

**ITSC FY01 Priority:** 4 - Low

**Justification**

**ITA:** ☐ **RPMS Growth Plan:** ☐

**ISAC Goals:** 13 Administrative Environment **Legislative Drivers:**

Since the Master Delivery Order List will improve the usability of the CHS package for all users, it is important to ensure that suggestions coming from the field alpha testers be implemented.

**Task Description**

1. Determine specific requirements with alpha testers and the CHS workgroup.
2. Design and develop the required code modifications.
3. Test the modifications and verify them against the SAC.



**Contract Health System (CHS) Purchase Order Enhancement**

# A-028

**Project Category:** Applications Patient Administrative **FY01 Project Type:** Enhancement**Contact:** Friedland, Paul**Sponsor:** CHS WG

This enhancement to the Contract Health Management Information System package will allow the user to reopen a purchase order after it has been closed. Purchase orders often must be reopened occasionally to handle outstanding charges missed or not incurred at the time the original PO was prepared and additional payments or reimbursements received since it was closed. To develop this enhancement requires changing the relationship of the order to the RCIS system.

**Current Status:** Not Started **% Complete:** 0%**Actual Begin Date:** **Estimated Duration:** 2 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
1	Sr Programmer	100.00%	2	304 Hours
1	Sr Technical Writer	50.00%	1	76 Hours
1	Verifier	50.00%	1	76 Hours
<b>Totals: 3 Staff</b>				<b>456 Hours</b>

**ITSC FY01 Priority:** 3 - Medium**Justification****ITA:** ☐ **RPMS Growth Plan:** ☐**ISAC Goals:** 01 Billing  
13 Administrative Enviroment**Legislative Drivers:**

The users not only want this change, it will make the software more closely imitate the regular business process.

**Task Description**

1. Design the change.
2. Develop the code modifications.
3. Test the fuctionality and verify with the SAC.

**Contract Health System (CHS) V. 3.1 Completion and Deployment # A-031****Project Category:** Applications Patient Administrative **FY01 Project Type:** Continuation**Contact:** Friedland, Paul

This project effort will enhance the Contract Health Management Information System software component that automates recording and reporting of denied and deferred services. The deferral component is ready and now must be incorporated into a version 3.1 of the package. Project staff also need to define all the areas in the software that need to be modified to make the package more robust, consistent, and maintainable. At the same time, developers will create detailed technical documentation for both the software and the enhancements made to it.

**Current Status:** In Testing **% Complete:** 88%**Actual Begin Date:** 01-Aug-00 **Estimated Duration:** 8 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
2	Sr Programmer	100.00%	8	2,432 Hours
1	Sr Technical Writer	100.00%	3	456 Hours
1	Verifier	100.00%	3	456 Hours
<b>Totals: 4 Staff</b>				<b>3,344 Hours</b>

**ITSC FY01 Priority:** 2 - High**Justification****ITA:** ☐ **RPMS Growth Plan:** ☐**ISAC Goals:** 01 Billing  
13 Administrative Environment**Legislative Drivers:**

Users have requested enhancements to the software that automates recording and reporting of denied services.

**Task Description**

1. Establish a base release for CHS.
2. Apply the software to the established base and test.
3. Alpha test the new software.
4. Compile feedback from the user/testers to determine future direction.

**Data Modeling Planning and Implementation**

# R-006

**Project Category:** Applications General**FY01 Project Type:** Continuation**Contact:** Butman, Anne

Using the Unified Modeling Language (UML), create object-oriented (OO) models of IHS systems, including data structures, use cases, and sequence diagrams. A Modeling Development Plan will be developed with short and long term approaches to introducing and training I/T/U staff to concepts and applications for modeling. A pilot application will be selected to work through the modeling process.

**Current Status:** In Progress      **% Complete:** 22%**Actual Begin Date:** 02-Oct-00      **Estimated Duration:** 12 Months**Staffed By:** Both**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
1	Project Lead	10.00%	12	182 Hours
1	Sr Systems Analyst	100.00%	12	1,824 Hours
<b>Totals: 2 Staff</b>				<b>2,006 Hours</b>

**ITSC FY01 Priority:** 2 - High**Justification****ITA:** ☒      **RPMS Growth Plan:** ☐**ISAC Goals:** 11 Data Quality  
12 CPR**Legislative Drivers:**

A key component of the IHS ITA is to move into object oriented (OO) programming, which will also bring IHS closer to the VA. By beginning to formally model IHS's existing systems in UML, application developers and process engineers will be better able to visualize what systems and information are available throughout an enterprise and facilitate new application development along with process reengineering. OO modeling will contribute substantially to a key ITA goal of strategic reuse through consistency, provability, and process control and improvement.

**Task Description**

1. Orient IHS IT staff to the modeling processes and associated products through training and mentor them through small- to medium-scale projects to develop a core set of skills, create a baseline of modeling artifacts, and make refinements to the modeling development plan through lessons learned from these pilot deployments.
2. Determine how best to introduce the concepts, tools, and techniques of modeling across IHS and across the 12 IHS Regional Areas.
3. Refine and introduce the methodology and tools for modeling throughout IHS by extending the efforts begun during the orientation of IHS IT staff (#1).
4. Develop a long-term plan that will identify the timeframes and sequence needed to deploy the

modeling tools and training throughout all areas of IHS, including the following tasks:

- a. Develop Training Requirements on area-by-area basis
- b. Identify Alternate Modeling and Standards approaches
- c. Determine Project Modeling, Standards, and Training Priorities
- d. Prepare Modeling Development Plan

**Enterprise Data Warehouse and DataMarts**# **I-007****Project Category:** Infrastructure General**FY01 Project Type:** Continuation**Contact:** Christy, Joan

This project will establish data warehouse systems that use XML and an open standard compliant RDMS with tools available for on-line analysis. The data warehouses will be scalable from a facility level up to an enterprise level. It will contain information aggregated from the I/T/U's administrative systems, healthcare systems, and other external data sources such as Medicare, Medicaid, and Private Insurance entities.

**Current Status: In Progress**      **% Complete:** 10%

Status is currently being reported under #O-025 Data Quality Action Team, which is taking the lead for planning data warehouse needs.

**Actual Begin Date:** 08-Mar-01      **Estimated Duration:** 12 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
1	Sr Database Administ	100.00%	12	1,824 Hours
1	Sr Programmer	100.00%	12	1,824 Hours
1	Project Lead	25.00%	12	456 Hours
1	Jr Systems Analyst	50.00%	12	912 Hours
1	Sr Technical Writer	25.00%	3	114 Hours
1	Verifier	75.00%	1	114 Hours
<b>Totals: 6 Staff</b>				<b>5,244 Hours</b>

**ITSC FY01 Priority:** 3 - Medium**Justification****ITA:** ☒      **RPMS Growth Plan:** ☒

**ISAC Goals:** 09 Decision Support  
10 Comparability of Public Health

**Legislative Drivers:**

A common repository of information currently does not exist for reporting and decision-support at the various enterprise levels. Currently, the I/T/U's and health care partners are sending data to multiple sources in multiple formats, making it impossible to ensure the validity and accuracy of data. This inconsistency limits the I/T/U's ability to effectively analyze its organization through the use of information at enterprise level.

**Task Description**

1. Perform database design and analysis.
2. Determine message protocols for information exchange.
3. Create SML DTD's from various feder data sources.
4. Test information exchange process.
5. Select reports and tools to utilize on the data warehouse or data mart.

**ENVOY Electronic Data Interchange (EDI) Deployment**# **A-055****Project Category:** Applications General**FY01 Project Type:** Continuation**Contact:** McCain, Jim**Sponsor:** BOAT

IHS intends to use a Contractor as needed to electronically route and translate healthcare claims and related documents such as carrier remittance advice documents to and from both billing and payment entities. It is the Agency's intent to use the UB92, HCFA 1500 Print Image, and the National Council for Prescription Drug Programs (NCPDP) format standards for accomplishing electronic data interchange of healthcare transactions with ENVOY.

The project will Interface RPMS to the Envoy Veriquest and DSS products. Also to interface with PNC bank to allow automated posting of A/R EOBs. Veriquest product allows for verification of insurance eligibility. DSS product allows for transmission of electronic claims through the Envoy clearinghouse and onto various payors. Pyxis will provide detailed monthly reports of billing information and collected revenue. PNC Bank (a lockbox service) can push electronic Remittance Advice (RA) data to RPMS for automated posting to the A/R package.

There are four components to the project, each with its own schedule: 1. Eligibility Verification, 2. Billing, 3. Electronic Remittance Advice, and 4. Electronic Remittance Payments.

**Current Status:** In Testing      **% Complete:** 70%**Actual Begin Date:** 22-Aug-00      **Estimated Duration:** 12 Months**Staffed By:** Both**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
1	Sr Management Anal	10.00%	12	182 Hours
1	Sr Network Specialist	25.00%	1	38 Hours
1	Sr Programmer	25.00%	6	228 Hours
1	Project Lead	40.00%	12	730 Hours
1	Jr Systems Analyst	25.00%	6	228 Hours
1	Sr Systems Analyst	10.00%	12	182 Hours
1	Sr Technical Writer	50.00%	4	304 Hours
<b>Totals: 7 Staff</b>				<b>1,892 Hours</b>

**Other Direct Costs (ODCs) Estimate**

ODC Category	Description	Total Cost
Contractor Services	Marshall Leach, DVA	\$22,500
<b>Total:</b>		<b>\$22,500</b>

**ITSC FY01 Priority:** 2 - High**Justification**ITA: ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 01 Billing**Legislative Drivers:**

The need for revenue generation support is a priority for the Indian Health Service (IHS). The use of

electronic data exchange is a Federal Legislative mandate, also cost effective and necessary to conduct business. The agency requires a full range of services for electronic processing of healthcare transactions and exchanging data with other Federal Agencies, State Entities, Private Sector Payers, also Medicare and Medicare Fiscal Intermediaries, Contractors, and Carriers. IHS is in need of a solution that will allow Area Offices, Service Units, Tribal and 638 Facilities to submit, receive and distribute healthcare transaction data directly or through a central point in a timely and secure manner.

**Task Description**

IHS is developing the capability to effectively support the activities required by the providers as well as the increased need for business functions for it's hospitals and clinics. IHS intends to migrate all healthcare claims, payments, collections, and related transactions (e.g. status notifications, insurance coverage verification, eligibility checking) from it's current mix of decentralized, proprietary (EDI) and manual, paper based systems to the electronic commerce standards set forth under the Health Insurance Portability and Accountability Act. (HIPAA) of 1996. Specific tasks include:

1. Identify upcoming I/T/U customers and expected levels to plan for ITSC support.
2. Identify additional programming on Patient Registration and other related applications that is needed.
3. Prepare project plan.
4. Prepare instructions and other user material for acquisition, installation, and implementation.
5. Work with the I/T/Us on deployment.

IHS plans for Phase I to include UB92, HCFA 1500 (print image), remittance advice eligibility checking, and NCPDP transactions for pharmacy claims as well as the Pharmacy Management System for point of sale. The contract shall be modified to allow for the use of ENVOY products such as DSS for posting remittance advice and the Veriquest eligibility checking software to enhance the services used by IHS. In addition, the clearinghouse shall assist IHS in a marketing and educational effort to solicit and convert both non-electronic payers and providers to electronic. Phase II will be expanded to include use of the ANSI X12 file formats for TS 270, TS 271, TS 837, TS 997, TS 835, TS 276, TS 277, TS 278.

**Background**

The primary objective of using the VA's Government Wide Contract would be to use a healthcare clearinghouse or value added network (VAN) to translate transactions to and from proprietary fiscal intermediaries and carrier transaction formats, including paper UB 92, HCFA 1500, Electronic Remittance Advice and Eligibility Checking and Verification.

The clearinghouse shall translate all IHS healthcare information into the appropriate formats or any proprietary format specifically acceptable to electronically enabled payers or it shall print and mail the claims, whichever is appropriate to IHS Trading Partners. It is planned that eventually all claims and eligibility transmissions will be internally translated by the agency. Initially IHS will submit batch data for breakout by the Contractor and will receive reconstituted batch data for update of insurance eligibility. Electronic processing is required to provide timely data interchange methods to improve the third party billing processing. For each transaction, IHS envisions functional acknowledgment. IHS envisions the

clearinghouse crosswalking the proprietary status notification from the payer's system. Claims edit checking will be performed on rejected claims specific to payers and error reports generated to notify IHS staff of the reason (s) for the rejection. Claims will be submitted electronically using the UB92 version 5 or HCFA1500 as required by the payer. Once the claim is adjudicated in the payers system IHS may choose to have the electronic remittance advice flow from the payer to IHS via the clearinghouse, or may choose to split the transaction with the explanation of benefits (EOB) returned to IHS. The payment/remittance advice (RA) is sent to the designated financial institute using the services of an EDI Lockbox Bank for these transactions.

**Comments**

Envoy provides three server/PCs for this system. The Veriquet PC sends a request to the Primary DSS PC. Using keystroke emulation the DSS PC dials into RPMS. On RPMS menu option is run to download the list of scheduled patients for the next day. This list is then fed into RPMS to generate face sheets for each patient. These face sheets are printed, through a serial port, to a file on the Veriquet computer. Every few minutes, the Veriquet computer looks for data in that file and if found, transmits via modem to Veriquet. The eligibility data is then sent to the Registration Package. The Medicare data is input into the Medicaid Insurance file and the Medicare and Private Insurance data is input to page 11. Any claims that the site wants to process through Envoy are "printed" to a file on the Veriquet box. The software detects for files periodically then transmits to Envoy. The RA data can be pushed by PNC bank to RPMS or can be picked up by Envoy and keystroke emulation can input into the A/R package.



**Evaluation of CORBAMed and COAS Services for GCPR**

# R-010

**Project Category:** Research & Development GCPR-Related **FY01 Project Type:** New**Contact:** Evans, FJ**Sponsor:** GCPR

This project will evaluate IHS's need and ability to implement CORBA and COAS. Clinical Observation Access Service (COAS) is a service defined by OMG's CORBAMed domain task force. This service provides a mechanism for medical content data interchange from a client to a server in a Common Object Request Broker Architecture (CORBA) environment. This is the service that is used by the GCPR framework and therefore must be interfaced with any participating members of the framework, e.g., RPMS for IHS. If approved, IHS will implement the client-side code that will call the COAS server-side functions. It will include query for population studies.

**Current Status:** Deferred **% Complete:** 0%

Discussions are still underway as to whether or not IHS should undertake a COAS evaluation and test this year.

**Actual Begin Date:** **Estimated Duration:** 8 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
2	Contractor Support	50.00%	6	912 Hours
2	Sr Programmer	75.00%	6	1,368 Hours
1	Project Lead	10.00%	8	122 Hours
1	Sr Systems Analyst	25.00%	8	304 Hours
<b>Totals: 6 Staff</b>				<b>2,706 Hours</b>

**ITSC FY01 Priority:** 3 - Medium**Justification****ITA:** ☒ **RPMS Growth Plan:** ☐**ISAC Goals:** 02 Interoperability**Legislative Drivers:**

This project is required to provide an interface from RPMS to the GCPR Framework in alpha. Moving to an object-oriented environment, specifically CORBAMed and COAS, will bring IHS closer to the VA environment.

**Task Description**

1. Work with VA and ESI on evaluating IHS's short- and long-term needs for CORBA and COAS.
2. Plan a pilot implementation strategy.
3. Implement the client-side code that will call the server-side functions. This will require extensive collaboration of IHS programmers with PRC personnel since this task involves developing a client-server interface, where IHS applications are the client and PRC software written for the GCPR Framework is the server.

**Executive Information Support System (EISS)**

# I-060

**Project Category:** Applications Financial & Admin**FY01 Project Type:** Continuation**Contact:** Gervais, Carl

This project will provide an integrated series of applications for information delivery, which will enable customers to display critical management-level information about the enterprise with graphs or reports (e.g., anticipated revenue from TPB claims for a specific month).

**Current Status:** In Testing      **% Complete:** 78%**Actual Begin Date:** 18-Sep-00      **Estimated Duration:** 12 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
1	Sr Database Administ	20.00%	12	365 Hours
2	Jr Programmer	20.00%	12	730 Hours
2	Sr Programmer	30.00%	12	1,094 Hours
1	Project Lead	30.00%	12	547 Hours
2	Jr Systems Analyst	30.00%	12	1,094 Hours
1	Sr Technical Writer	30.00%	3	137 Hours
1	Verifier	30.00%	12	547 Hours
<b>Totals: 10 Staff</b>				<b>4,514 Hours</b>

**ITSC FY01 Priority:** 2 - High**Justification**ITA: ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 07 GUI**Legislative Drivers:**

An executive information system helps to overcome some of the difficulties in combining data from widely varying sources in a standard way. An EIS will provide easily understood summaries and displays for key decision-makers in the organization.

**Task Description**

1. Review with I/T/U customers the type of reports that have been developed and others that would be useful for their management teams. Systems analysts will develop any additional functional requirements necessary, including layout of the file and/or report, and will obtain project acceptance from customers prior to beginning further program development.
2. Systems analysts will write detailed program specifications reflecting additional reports or revisions to those previously drafted.
3. Project will be assigned to a programmer for the development effort.
4. Programs will be tested and verified.

5. Once fully tested and verified by ASDS and NPIRS staff, the product will be provided to the customer for acceptance.

**File 200 Conversion**

# I-063

**Project Category:** Infrastructure General**FY01 Project Type:** Continuation**Contact:** Pike, Michael

This project involves implementation of the conversion of the PCC V files at RPMS facilities. Within the RPMS software suite there have been four "people" files: user file #3, provider file #6, person file #16, and new person file #200. Existence of these different files has traditionally caused a good deal of difficulty with RPMS software and its customers. In this project, developers will merge data in the user file, the provider file, and the person file into the new person file (#200) where files 3, 6 and 16 will no longer be used or needed.

**Current Status:** In Testing      **% Complete:** 89%**Actual Begin Date:** 01-Nov-99      **Estimated Duration:** 6 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
1	Jr Programmer	50.00%	7.5	570 Hours
1	Sr Programmer	50.00%	7.5	570 Hours
1	Project Lead	30.00%	7.5	342 Hours
<b>Totals: 3 Staff</b>				<b>1,482 Hours</b>

**ITSC FY01 Priority:** 2 - High**Justification****ITA:** ☒      **RPMS Growth Plan:** ☒**ISAC Goals:** 02 Interoperability**Legislative Drivers:**

This conversion of files 3, 6, 16 into file 200 should eliminate the difficulty that customers have with the RPMS software. Completion of this project is also a prerequisite for PIMS.

**Task Description**

1. An analysis will be made to determine the needs for a conversion routine to merge files 3, 6, 16 into 200. If conversion is needed to merge data into file 200, a conversion routine(s) will be developed and executed.
2. Files 3, 6 and 16 will be deleted.
3. Each modified routine will be tested separately from PCC using simulations of data conversion.
4. All packages will be fully tested as a unit. This will assure how all options and functions still operate correctly together. All problems will be dealt with as appropriate.
5. All software will be packaged into a single installation where possible. This is to avoid any implementation coordination problems. Since all facilities do not use the same suite of packages, the install will be smart enough to determine the precise packages to load, and load them.

**GCPR Framework Pilot IHS Implementation Activities**

# R-025

**Project Category:** Research & Development GCPR-Related**FY01 Project Type:** New**Contact:** Huggins, George**Sponsor:** GCPR

This project encompasses all of the technical activities required to enable the RPMS demo database to become "Framework ready" for GCPR Framework Phase II (Pilot) testing. Key activities include: set up and maintenance of the RPMS development environment (see #R-001); RPMS Framework Pilot database set up and maintenance (#R-001); terminology modeling and related software modifications such as Lab (see #R-005 LOINC) and Pharmacy standard codeset mapping; modifying the Patient Chart as the interface layer to the Framework; implementing SQL capabilities; validating and implementing user roles, RAD, PKI and other security features as needed; develop APIs for Framework interface; etc.

**Current Status:** On Hold      **% Complete:** 50%

3/1/01: IHS activity is on hold until fall due to near-term refocus of VA/DoD efforts.

**Actual Begin Date:** 02-Oct-00      **Estimated Duration:** 6 Months**Staffed By:** Outsourced**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
2	Sr Programmer	75.00%	6	1,368 Hours
1	Sr Systems Analyst	25.00%	6	228 Hours
<b>Totals: 3 Staff</b>				<b>1,596 Hours</b>

**Other Direct Costs (ODCs) Estimate**

ODC Category	Description	Total Cost
Contractor Services	Mitretek	\$24,000
<b>Total:</b>		<b>\$24,000</b>

**ITSC FY01 Priority:** 2 - High**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐

**ISAC Goals:** 02 Interoperability  
 12 CPR  
 15 Partnerships

**Legislative Drivers:**

A successful implementation of the Framework Project can assist the IHS in reaching many of its technology goals. Even if the Framework is not immediately or fully deployable, the IHS will garner many benefits. 1) Enhance our technical understanding of new techniques and technologies, such as CORBA and CORBAMed, Unified Software Development Process (USDP), HL7, and others. 2) Keep current with solutions for similar organizations. 3) Participate in standards development and acceptance. 4) Leverage the agency's limited technical resources so don't reinvent the wheel.

In the longer term, IHS must focus on the ability of RPMS to support integration of Commercial or Government Off-the-Shelf (COTS/GOTS) software using inter-application and inter-site messaging.

The increased use of COTS/GOTS products, use of private sector outsourcing, buy versus build analyses, and other directives have generated a number of real IHS business needs. This currently includes near-term migration to local architecture based on regional repositories, and message-enabled clinical data integration and most likely a longer-term evolution to an object based distributed architecture.

**Task Description**

1. Purchase and install a CORBA/COM bridge so that the IHS Visual Basic client can connect with the GCPR Framework.
2. Integrate the bridge into Patient Chart.
3. Map appropriate codesets to V Med and V Lab and ensure that COAS template traits are supported.
4. Validate STM mapping.
5. Install and test SQL schema.
6. Add triggers to A04 and A08 messages and identify trigger events to support cache updates.
7. Define and implement how IHS will support query for population studies.
8. Implement RAD.
9. Validate roles in RPMS and define data access and develop appropriate DDs and utilities to support.
10. Modify the IHS Patient Chart v. 1.05 to serve as the presentation layer from RPMS to the GCPR Framework.
11. Develop APIs for Lab, Meds, Demographics and Population
12. Implement PKI.

**Background**

The GCPR Framework is an enabling infrastructure for the exchange of clinical patient records and information, initially among the three cooperating Federal agencies responsible for providing healthcare. It will provide communication and operation services for the larger, Federal healthcare enterprise and access to the continuum of patient care among internal agency facilities and from any or all external sources as appropriate. Designed to assemble an individual patient's medical information from various disparate systems, the GCPR Framework will construct a single view of that data. Ideally, from the care provider's view, the various healthcare systems should operate as though they were one large system with a single user interface and operational environment to provide online, real-time, worldwide data access and processing.

See #R-002 GCPR Framework Program Activities for additional background on GCPR.

**GCPR Program Level Support**

# R-002

**Project Category:** Research & Development GCPR-Related**FY01 Project Type:** Continuation**Contact:** Huggins, George**Sponsor:** GCPR

GCPR Program activities include those activities performed at the multi-agency Project team level that manages the project and develops and delivers clinical and technical requirements and approaches for implementation by the prime contractor. In FY01, IHS will continue to participate actively within each of the main areas of focus: program management, technical, clinical and modeling.

**Current Status:** On Hold      **% Complete:** 40%

3/1/01: IHS participation is minimal until fall 2001, due to VA/DoD short term refocus.

**Actual Begin Date:** 02-Oct-00      **Estimated Duration:** 12 Months**Staffed By:** Both**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
1	Sr Management Anal	15.00%	12	274 Hours
1	Project Manager	10.00%	12	182 Hours
2	Sr Programmer	15.00%	12	547 Hours
1	Project Lead	25.00%	12	456 Hours
3	Subject Matter Exper	40.00%	12	2,189 Hours
1	Sr Systems Analyst	25.00%	12	456 Hours
<b>Totals: 9 Staff</b>				<b>4,104 Hours</b>

**Other Direct Costs (ODCs) Estimate**

ODC Category	Description	Total Cost
Contractor Services	Mitretek (primarily for Security and TC IPTs)	\$240,000
<b>Total:</b>		<b>\$240,000</b>

**ITSC FY01 Priority:** 2 - High**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐

**ISAC Goals:** 02 Interoperability  
 12 CPR  
 15 Partnerships

**Legislative Drivers:**

A successful implementation of the Framework Project can assist the IHS in reaching many of its technology goals. Even if the Framework is not immediately or fully deployable, the IHS will garner many benefits. 1) Enhance our technical understanding of new techniques and technologies, such as CORBA and CORBAMed, Unified Software Development Process (USDP), HL7, and others. 2) Keep current with solutions for similar organizations. 3) Participate in standards development and acceptance. 4) Leverage the agency's limited technical resources so don't reinvent the wheel.

In the longer term, IHS must focus on the ability of RPMS to support integration of Commercial or Government Off-the-Shelf (COTS/GOTS) software using inter-application and inter-site messaging. The increased use of COTS/GOTS products, use of private sector outsourcing, buy versus build analyses, and other directives have generated a number of real IHS business needs. This currently includes near-term migration to local architecture based on regional repositories, and message-enabled clinical data integration and most likely a longer-term evolution to an object based distributed architecture.

**Task Description**

In addition to managing budgets, schedules and contractor deliverables, inter-agency government responsibilities include the following tasks:

1. Complete and deliver the Government and Terminology Reference Models.
2. Identify standards to adopt.
3. Build an interagency telecommunications network.
4. Address security and confidentiality issues.
5. Outline application and systems integration issues.

**Background**

Three Federal agencies, the Department of Defense (DoD), Department of Veterans Affairs (VA), and the Indian Health Service (IHS), have embarked on the Government Computer-based Patient Record (GCPR) Program, a joint effort to improve information sharing and collaborative decision-making across the continuum of Federal healthcare. The goal of the GCPR Program is to improve public and individual healthcare by using existing technology to share patient health-related information in a secure manner at a level unachievable with a paper record.

The GCPR Framework is an enabling infrastructure for the exchange of clinical patient records and information, initially among the three cooperating Federal agencies responsible for providing healthcare. It will provide communication and operation services for the larger, Federal healthcare enterprise and access to the continuum of patient care among internal agency facilities and from any or all external sources as appropriate. Designed to assemble an individual patient's medical information from various disparate systems, the GCPR Framework will construct a single view of that data. Ideally, from the care provider's view, the various healthcare systems should operate as though they were one large system with a single user interface and operational environment to provide online, real-time, worldwide data access and processing.

The GCPR Project Management Team uses technical and clinical participants from each cooperating agency to develop and deliver information through two different types of activities: government-led Workgroups and prime contractor-led Integrated Product Teams (IPTs). While the government Workgroups are concerned with requirements definition, the IPTs will ensure the requirements are being addressed, as well as enhance the efficiency, effectiveness and quality of the deliverables and Framework products.



**Generic Interface System (GIS) Pilot**

# R-004

**Project Category:** Infrastructure General**FY01 Project Type:** Continuation**Contact:** McCain, Jim**Sponsor:** GCPR

RPMS will use a message generating system, the Generic Interface System (GIS), to generate HL7 messages. GIS will replace the current HL and BHL packages. The purpose of the GIS is to provide data interchange via HL7 not only between the GCPR Framework and RPMS, but also for ongoing data exchange for IHS sites' internal application needs, such as pharmacy (Viking), lab instrument interfaces (Data Innovations), Third Party Billing (3M), special interfaces to outside entities, e.g. the Center for Disease Control (CDC), etc.

**Current Status:** In Testing      **% Complete:** 90%**Actual Begin Date:** 15-Nov-00      **Estimated Duration:** 3 Months**Staffed By:** Both**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
1	Project Lead	25.00%	3	114 Hours
<b>Totals: 1 Staff</b>				<b>114 Hours</b>

**Other Direct Costs (ODCs) Estimate**

ODC Category	Description	Total Cost
Contractor Services	Cimarron Medical Informatics (part of HL7 Support Task Order)	\$19,000
<b>Total:</b>		<b>\$19,000</b>

**ITSC FY01 Priority:** 2 - High**Justification****ITA:** ☒      **RPMS Growth Plan:** ☐**ISAC Goals:** 02 Interoperability**Legislative Drivers:**

Implementing GIS will provide one standard interface from RPMS to other applications, reducing the need for custom coding. Promoting use of standards-based messaging and interface engines will provide IHS with many benefits. Among these are reducing the cost of interfacing, which without an enterprise strategy can be a major and often unanticipated capital investment. Standardized messaging assists in reducing the number of customized interfaces between local applications, corporate level systems, and communication with systems operated by external partners.

**Task Description**

1. Identify alpha test site, prepare site and install GIS.
2. Test and evaluate.
3. Provide Go/No Go decision on GIS implementation.

**Background**

The Generic Interface System originally was developed by the VA and then used by SAIC for DoD's CHCS I. IHS evaluated several tools. In FY00, SAIC was contracted to port GIS into the IHS test

environment.

**Health Level 7 (HL7) Maintenance for IHS**

# A-013

**Project Category:** Infrastructure General**FY01 Project Type:** Continuation**Contact:** McCain, Jim

The I/T/Us currently have a number of systems utilizing IHS and contract developed HL7 messages and tools to provide interoperability and information exchange. This project establishes a DIR HL7 support group to support these interfaces and the utilization of this ANSI Standard for healthcare information exchange and interoperability. Related projects include #R-004 GIS Pilot, #I-009 GIS Deployment, RPMS-3M Interface at Santa Fe (Mitretek),

**Current Status:** In Progress      **% Complete:** 70%**Actual Begin Date:** 01-Dec-00      **Estimated Duration:** 12 Months**Staffed By:** Outsourced**Estimated InHouse FY01 Staffing Requirements**

#	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
1	Sr Network Specialist	10.00%	12	182 Hours
1	Jr Programmer	10.00%	12	182 Hours
1	Sr Programmer	10.00%	12	182 Hours
1	Project Lead	10.00%	12	182 Hours
1	Sr Technical Writer	25.00%	7.5	285 Hours
1	Verifier	25.00%	2	76 Hours
<b>Totals: 6 Staff</b>				<b>1,091 Hours</b>

**Other Direct Costs (ODCs) Estimate**

<u>ODC Category</u>	<u>Description</u>	<u>Total Cost</u>
Contractor Services	Cimarron Medical Informatics (about 200 of total 1,400 hours have been allocated to GIS)	\$110,400
<b>Total:</b>		<b>\$110,400</b>

**ITSC FY01 Priority:** 2 - High**Justification****ITA:** ☒      **RPMS Growth Plan:** ☐

**ISAC Goals:** 01 Billing  
 02 Interoperability  
 98 Legislated

**Legislative Drivers:** HIPAA

The objective of this project is to assist the Indian Health Service in continuing its implementation of standards-based information exchange in a coordinated approach, in near term support of the GCPR Framework Project, and for the longer-term benefit of RPMS users. This task will support the Agency's requirement to comply with current legislation using standards-based information resources management, identifying the need for integration/incorporation of Commercial-off-the-Shelf (COTS) and Government-off-the-Shelf (GOTS) products with IHS information systems. IHS has been using the HL7 standard for clinical information exchange since the mid 90s. The definition

and creation of the HL7 messages, the maintenance of the HL7 tools, and the HL7 Help Desk services were provided by DIR personnel. When the existing DIR personnel left the agency the support left with them. With the renewed effort to enhance RPMS interoperability and the distribution of the agency Laboratory Package and its HL7 instrument interface there is an increasing need to re-establish these support packages.

**Task Description**

Provide technical resources familiar with the I/T/U computing environment to provide technical support, user support, and programming and maintenance support of HL7 applications. Tasks will include, but not be limited to:

1. Programming maintenance and support of the VA HL7 application.
2. Consultation to COTS vendors using HL7 messages to communicate with I/T/U information systems and to I/T/U and national programming and technical personnel for applications using HL7 messaging.
3. Assisting in the migration of existing RPMS HL7 interfaces to GIS, based on a case-by-case determination of need, technical feasibility, cost.
4. Support and maintenance of IHS GCPR HL7 messages necessary for MPI/MPIL, and other HL7 messaging required in the GCPR Framework project.
5. Support and consultation of I/T/U use of the Cloverleaf Integration Engine, and other messaging integration engines.
6. Assisting in the establishment of the IHS HL7 Message Standards for subsequent versions of HL7.
7. Providing support of requested IHS RPMS HL7 messages with an IHS chosen COTS regional data repository.
8. Develop a plan for interapplication communication using GIS, HL7, and the Cloverleaf Integration Engine.

**Background**

Although HL7 is already part of the Division of Information Resource's (DIR) technology architecture and some initial steps have been undertaken by the Agency, further work is needed. For example, currently within IHS, HL7 is not used for query capabilities in RPMS, although the capability exists. RPMS needs to support the full range of queries supported by HL7. Additionally, IHS must plan for and support the migration from current to subsequent HL7 Versions. This could include continued support of existing versions of HL7. The existing HL7 message generating system within RPMS is being replaced by GOTS.

**Comments**

This will become an ongoing O&M project in future years. Technical support will be provided primarily by Cimarron Medical Informatics. A more detailed support plan is being developed under contract.

## ICD Code Updates

# A-042

**Project Category:** Applications Patient Administrative **FY01 Project Type:** Operations & Maintenance

**Contact:** Lujan, Shirley

In this project, staff update and distribute the ICD Diagnosis, ICD Procedure, and related tables with current ICD code information, for direct and contract inpatient record submissions to NPIRS and PCC.

**Current Status:** Completed **% Complete:** 100%

**Actual Begin Date:** 16-Oct-00 **Estimated Duration:** 2 Months **Date Complete** 06-Dec-00

**Staffed By:** In House

## Estimated InHouse FY01 Staffing Requirements

#	Labor Category	%	Months	Total Hours
1	Sr Programmer	50.00%	1	76 Hours
1	Verifier	10.00%	0.5	8 Hours
Totals: 2 Staff				84 Hours

**ITSC FY01 Priority:** 1 - Required

## Justification

**ITA:** ☐ **RPMS Growth Plan:** ☐

**ISAC Goals:** 01 Billing

**Legislative Drivers:** HCFA

When there is an annual update to these codes, it is required that they be distributed to the field to maintain coding currency in support of appropriate billing.

## Task Description

1. Download the code updates.
2. Prepare them for the IHS community.
3. Test the application.
4. Release them through Verification.

**Immunizations Information Exchange Support**

# A-017

**Project Category:** Applications Clinical**FY01 Project Type:** Continuation**Contact:** Huggins, George

The objective of this project is to enable IHS to continue its implementation of standards-based immunization information exchange in a coordinated approach. Immediate support will be rendered to the Phoenix, Navajo, and Tucson Areas initiative for the exchange of information with the Arizona State Immunization Information System (ASIIS). The longer-term goal is to provide a standards-based exchange of immunization information with all state registries and appropriate information exchange partners through the RPMS Immunization application (IMM).

Although IMM is already part of the Division of Information Resource's (DIR) suite of RPMS applications, and some initial steps have been undertaken by the Agency to exchange immunization information, further work is needed. For example, IMM is capable of exporting immunization in HL7 format, but there is no functionality for import of immunization into the application's database.

**Current Status: Funding Need: % Complete:** 1%

Immunization WG is seeking funding from other areas of IHS.

**Actual Begin Date:** 01-Nov-00 **Estimated Duration:** 12 Months**Staffed By:** Outsourced**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
1	Project Lead	5.00%	12	91 Hours
1	Jr Technical Writer	25.00%	3	114 Hours
<b>Totals: 2 Staff</b>				<b>205 Hours</b>

**Other Direct Costs (ODCs) Estimate**

ODC Category	Description	Total Cost
Contractor Services	Cimarron Medical Informatics	\$104,500
<b>Total:</b>		<b>\$104,500</b>

**ITSC FY01 Priority:** 3 - Medium**Justification****ITA:** ☐ **RPMS Growth Plan:** ☐
**ISAC Goals:** 02 Interoperability  
 98 Legislated

**Legislative Drivers:** GPEA  
 HIPAA  
 State

This project will support the Agency's desire to comply with current legislation using standards-based information resources management, identifying any need for the integration and incorporation of Commercial-off-the-Shelf (COTS) and Government-off-the-Shelf (GOTS) products that would be useful to IHS immunization information systems. Data obtained from the state registry would improve IHS immunization rates, since children who were being "lost" to the IHS system could still be tracked via the state's database.

**Task Description**

Task 1: Technical Support and Consultation for the RPMS Immunization application: provide technical support, user support, and programming and maintenance support of the RPMS Immunization (IMM) application. Tasks will include:

- Marshaling of IMM through testing, certification, release, and deployment;
- Programming maintenance, support, and implementation of IMM;
- Update and/or creation of any documentation required or needed to support the IMM;
- Consultation to COTS vendors using HL7 messages to communicate with IMM;
- Consultation to State employees and contractors in establishing their exchange of IMM data;
- Consultation and support to programming and technical personnel at I/T/Us using IMM;
- Consultation and support on IMM to national programming and technical personnel;
- Assisting I/T/Us in the migration of any existing immunization applications onto IMM;
- Support and consultation to the IIE work group, including regular participation in IIE conference calls and meetings;
- Development of data import functionality into the IMM;
- Investigation, study, research and testing in use of the Cloverleaf Integration Engine, or any other integration engine identified by the COTR, in routing and managing messages containing IMM data, either outbound or inbound;
- Consultation and programming maintenance and support in the movement of IMM messages among I/T/Us;
- Consultation and support of IHS representatives to immunization or messaging standards boards or committees, e.g., CIRSET or HL7;
- Consultation and support to the IIE, COTR, and/or IMM owner when considering exchanging IMM data using non-standard formats and/or methods;

Task 2: Training on the RPMS Immunization application: provide training in IMM, including up to three formal classroom training courses. The locations will normally be at national training classrooms located in Albuquerque, NM, and Phoenix, AZ, but could be in Area or I/T/U classroom facilities, e.g., the Navajo Area IT Training Center in Window Rock, AZ.

The course curricula will include, but not be limited to: the CDC NIP; IMM setup, data entry, reports, forecasting, data export, and data import. Length of the course will be determined in consultation with, and approval by, the IIE and/or the IMM owner.

**Background**

Arizona was one of the early entrants into the field of creating and utilizing immunization registries. In 1996, the Arizona State Legislature passed a law mandating that all immunizations given to children be reported to the Arizona Department of Health Services (ADHS) for inclusion in the state's immunization registry, effective January 1, 1997.

Knowing that the Indian Health Service (IHS) did not have the resources to comply with the law as written (either double data entry, or paper record), a query was sent to the IHS Privacy Act Coordinator (HQ), asking whether the IHS facilities had to comply with this Arizona law. The response that came, along with commentary and interpretation from the Office of General Counsel (OGC), was that under "the doctrine of Federal superiority," IHS did not have to comply. Also discussed with OGC was that state Immunization Data Registries were a special project of the Centers for Disease Control and Prevention (CDC), an IHS "sister agency" within the Department of Health and Human Services, and that IHS should seek to cooperate with, rather than oppose, its sister

agency.

Knowing that exchanging information with the state registry had distinct advantages that would benefit Indian children, the three IHS Areas in Arizona (Phoenix, Navajo, Tucson) responded to HQ that they wanted to comply, but electronically, rather than in paper fashion. All Areas were already entering IHS immunization data into RPMS, and did not wish to re-enter data, with the possibility of introduction of new data errors. It was also reasoned by the IHS clinicians that data obtained from the state registry would improve IHS immunization rates, since children who were being “lost” to the IHS system could still be tracked via the state’s database. This was particularly important in the IHS, Tribal, and Urban (I/T/U) Service Units having a large urban population such as Phoenix, where highly mobile urban children comprise 40% of the Phoenix Area’s immunization database, and may receive care from multiple providers.

Liaison activities then proceeded between ADHS, the ADHS data system contractor, Scientific Technologies Corporation (STC), the Phoenix Area Office, Division of Information Resource Management (DIRM-Phoenix), and the Division of Information Resources (DIR, Office of Management Support, IHS HQ) on elements of the database and exchange. Contact was made by DIR staff with CDC for assistance, as the ADHS database (using the proprietary program PCImmunize, funded under a CDC grant) was not then compliant with the Health Level 7 (HL7) messaging standards. The IHS RPMS immunization application (IMM) was already HL7 compliant, and the new version, v. 7.0, was deployed, which also had data export functionality.

The STC subsequently revised PCImmunize to make it HL7 compliant. The State of Arizona has been active in advocating enhanced immunization information exchange standards through their communications with the Committee on Immunization Registry Standards and Electronic Transactions (CIRSET), a CDC group that works on standards.

As of February, 1998, CDC reported that 22 states have laws authorizing a state immunization registry, with 12 of the states mandating reporting. As of April, 1999, CDC reported 43 of the 64 (67%) immunization project grantees under their National Immunization Program (NIP) have registries that are beyond pilot testing with one or more sites routinely providing data to a central database. Twenty-six States and the District of Columbia have 1 or more private physicians enrolled.

In April, 2000, the IHS Immunization Information Exchange (IIE) work group was formed by DIR and I/T/U personnel to manage and guide the project. Representatives of STC and ADHS regularly participate in IIE conference calls.



**Inpatient Medications v. 4.0/4.5 Deployment**

# A-049

**Project Category:** Applications Clinical**FY01 Project Type:** Continuation**Contact:** Moore, Edgar**Sponsor:** Pharmacy PSG

The goal of this project is to make V. 4.0 and V. 4.5 of the Inpatient Medications software packages available for general distribution to all IHS pharmacy customers. The ultimate goal of this project would be to combine V. 4.0 and V. 4.5 into one package for release to the service units. This would reduce the amount of work involved at each site for installation – however, one of the tasks within this project is to determine if this is a viable option and technically achievable.

These versions of the Inpatient Medication software package were produced to primarily allow IV orders to be included on the Medication Administration Record, and to provide enhancements to several functions found in previous releases. This is a prerequisite for successful implementation of Inpatient Meds V 5.

**Current Status: On Hold**      **% Complete:** 50%

1/4/01: On hold until after the Pharmacy Point of Sale (POS) is released.

**Actual Begin Date:** 02-Oct-00      **Estimated Duration:** 4 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
1	Jr Programmer	100.00%	4	608 Hours
1	Sr Programmer	100.00%	4	608 Hours
1	Jr Technical Writer	20.00%	1	30 Hours
1	Verifier	10.00%	1	15 Hours
<b>Totals: 4 Staff</b>				<b>1,262 Hours</b>

**ITSC FY01 Priority:** 2 - High**Justification****ITA:** ☐      **RPMS Growth Plan:** ☒**ISAC Goals:** 01 Billing**Legislative Drivers:**

The Inpatient Med upgrade is needed to improve the process of dispensing inpatient medications at IHS inpatient sites. These packages are also listed as VA prerequisites for V. 4.0 of the National Drug File software package.

**Task Description**

1. Determine IHS list of prerequisite software and software dependencies. Full analysis will determine which of these packages are required to run the IHS version of this package and what modifications are needed (if any) to ready the packages for installation, or upgrade.
2. Determine if IHS sites intend on running Unit Dose. IHS sites are not currently running the Unit Dose portion of the VA Inpatient Medications. Poling of the IHS pharmacy sites needs to occur and a decision must be made as to whether this feature will be offered in the IHS Inpatient Medications V4.0/V4.5 release. Modifications to the software package will need to be made if the final decision is

to disable the Unit Dose functionality.

3. Create a new partition/UCI large enough to hold version 4.0, version 4.5, and all supporting software on the HQW system. This includes completion of tasks 1 and 2, determination of space requirements, creation of UCI, installation of supporting software, and establishment of access and security.

4. Install and configure Version 4.0 and Version 4.5 on HQW system. All VA patches for the VA version of Inpatient Medications V4.0 and V4.5 need to be identified, reviewed, and when appropriate, readied for installation.

5. Perform testing and verification of Inpatient Medications V4.0 and V4.5, ensuring that all options are functioning properly. Verify that the documentation matches the performance of the software. Document, resolve, and re-test any discrepancies identified.

**ITSC Customer Service and User Policies & Procedures**# **O-030****Project Category:** Other**FY01 Project Type:** New**Contact:** Willie, Raymond

Review existing policies and procedures for internal users and external customers; update and revise or develop as needed; and publish and communicate. Specific areas of concern include 1) IHS Web Page Maintenance & Staffing Policy and 2) ITSC Resource Library Maintenance & Notification

**Current Status:** Not Started      **% Complete:** 0%**Actual Begin Date:**      **Estimated Duration:** 6 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
1	Jr Management Anal	5.00%	6	46 Hours
1	Project Lead	5.00%	6	46 Hours
1	Jr Systems Analyst	5.00%	6	46 Hours
1	Jr Technical Writer	10.00%	6	91 Hours
1	Jr Web Developer	10.00%	6	91 Hours
<b>Totals: 5 Staff</b>				<b>319 Hours</b>

**ITSC FY01 Priority:** 2 - High**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:****Legislative Drivers:****Task Description**

1) Policy Review and Development

2) Resource Library Maintenance and Notification

This project will provide an Intranet page of latest products and software (including RPMS) downloads and will include development of a list manager for auto notification of new entries. The list will include a summary of each product and its use. This page will provide a quick, centralized place for users to see what's new and available without having to browse multiple pages of products and documentation.

a) Develop page

b) Develop auto notify function

3) Maintain page

**ITSC Lifecycle Development Plan and Implementation**

# O-002

**Project Category:** Other**FY01 Project Type:** New**Contact:** Willie, Raymond

This project will prepare a standard approach to package development and modification based upon accepted lifecycle development methodology. This effort will define the comprehensive process that ITSC developers will use to obtain customer needs and requirements, create a reviewed and approved application design, and develop, test, and verify the resulting software. The goal of this process development will be to achieve the Software Engineering Institute (SEI) Capability Maturity Model (CMM) Level 2 (Repeatable Process) status. With the process defined, project staff will determine the way in which to implement it into the ITSC development environment.

**Current Status:** In Progress      **% Complete:** 1%**Actual Begin Date:** 01-Mar-01      **Estimated Duration:** 3 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
1	Jr Management Anal	10.00%	3	46 Hours
2	Sr Programmer	10.00%	3	91 Hours
1	Sr Technical Writer	10.00%	3	46 Hours
1	Verifier	10.00%	1	15 Hours
<b>Totals: 5 Staff</b>				<b>198 Hours</b>

**ITSC FY01 Priority:** 2 - High**Justification****ITA:** ☒      **RPMS Growth Plan:** ☐

**ISAC Goals:** 04 Technical Support  
09 Decision Support

**Legislative Drivers:**

Having a lifecycle development process in place standardizes the approach to clarifying customer requirements, design, and programming, improving the results of each stage and involving reviews along the way. Results would include some improved degree of cross-training among the package developers, more standardization in design and coding styles, and more predictability in estimating timeframes and resource requirements.

**Task Description**

1. Assign workgroup members.
2. Assemble references and distribute to members for review.
3. In group, define lifecycle components to be included in the IHS model and where review by colleagues would be implemented.
4. Determine a implementation plan.
5. Document the process and its implementation for management approval.
6. Distribute to professional staff and implement.

**Lab Electronic Review and Signature Enhancement**

# A-035

**Project Category:** Applications Clinical**FY01 Project Type:** Enhancement**Contact:** Moore, Catherine**Sponsor:** Chinle

The Chinle Service Unit of the Navajo Area Indian Health Service would like to pursue enhancements to the RPMS Laboratory Package to add the capability of facilitating and tracking review of laboratory results by clinicians. The enhancements should minimize modifications to existing module code (i.e., be considered more of an "add-on" product than a module enhancement) and go through the IHS verification process before operational implementation. The work to be completed is the development and documentation necessary to add functionality to the RPMS Laboratory Package.

**Current Status:** In Progress      **% Complete:** 5%**Actual Begin Date:** 07-Dec-00      **Estimated Duration:** 9 Months**Staffed By:** Outsourced**Estimated InHouse FY01 Staffing Requirements**

#	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
1	Jr Network Specialist	10.00%	1	15 Hours
1	Jr Programmer	50.00%	9	684 Hours
1	Project Lead	10.00%	9	137 Hours
1	Jr Technical Writer	10.00%	1	15 Hours
1	Sr User Support	15.00%	7	160 Hours
<b>Totals: 5 Staff</b>				<b>1,011 Hours</b>

**Other Direct Costs (ODCs) Estimate**

<u>ODC Category</u>	<u>Description</u>	<u>Total Cost</u>
Contractor Services	Mitretek (cost TBD)	\$0
<b>Total:</b>		<b>\$0</b>

**ITSC FY01 Priority:** 4 - Low**Justification**ITA: ☐      **RPMS Growth Plan:** ☐
**ISAC Goals:** 13 Administrative Environment      **Legislative Drivers:** GPEA  
 98 Legislated

There are a number of review processes within the Lab package written for lab supervisors, but to date there is no mechanism to track the electronic review of an individual test by the ordering provider.

**Task Description**

1. Add an alert upon user sign-on to RPMS indicating that the clinician has laboratory results that require review. These alerts would only be displayed to providers.
2. Allow the clinician to pull-up all laboratory results, either "by patient" or "by provider," that have

been completed and have not been electronically acknowledged as "reviewed".

3. Allow the clinician to review on-line all laboratory results that they have ordered and provide an option for the following. One or more of these options may be used while reviewing the results, with the clinician being able to return to the menu of options after completing a particular option.
4. Allow the clinician to transfer unreviewed lab results (which would include alerts) to another clinician for review. This would allow a permanent or temporary provider to transfer all results from "X" to "Y" dates to another provider. After the "Y" date, lab results and alerts would automatically be sent to the ordering clinician.
5. Include the electronic signature and the date of the signature in the historic record of the laboratory accession. The enhancement should be designed so that a site is not required to use the electronic signature, nor be "penalized" for not using the signature. For example, if they choose not to use the signature, they should not get the alerts upon RPMS sign-on telling them that they have labs to review. Also they should not have to go through extra steps/screens to avoid the electronic signature module.
6. Modify all on-line reports containing detail data about the laboratory accession to include the signature and signature date of review.
7. Allow a view-only supervisor capability to pull up laboratory accessions within their Service Unit that have not been reviewed within "X" days (with "X" being a variable entered by the supervisor).

**Comments**

This project is being partially funded by the Navajo Nation because it is a high priority to them.

**Lab Package Interface to Reference Labs**

# A-010

**Project Category:** Applications Clinical**FY01 Project Type:** New**Contact:** Moore, Catherine**Sponsor:** Lab PSG

An interface between IHS laboratories using the RPMS Lab package and the national reference laboratories (Quest and Lab Corp) needs to be developed and deployed to electronically pass laboratory test orders and test results. Current HL7 technology (Data Innovation's Instrument Manager) being used at 45 of the IHS labs could be used as the mechanism for passing HL7 messages between the IHS labs and reference labs.

**Current Status:** Not Started      **% Complete:** 0%**Actual Begin Date:**      **Estimated Duration:** 9 Months**Staffed By:****Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
1	Jr Programmer	100.00%	9	1,368 Hours
1	Project Lead	100.00%	9	1,368 Hours
1	Sr Technical Writer	100.00%	2	304 Hours
<b>Totals: 3 Staff</b>				<b>3,040 Hours</b>

**ITSC FY01 Priority:** 3 - Medium**Justification****ITA:** ☒      **RPMS Growth Plan:** ☐**ISAC Goals:** 02 Interoperability**Legislative Drivers:**

All IHS laboratories using the RPMS Lab package need to be entering their reference laboratory testing into the lab package for electronic retrieval by the providers and automatic billing via PCC. Currently, some of these labs are manually entering their reference lab results into the computer. This leads to data entry error and delays in retrieving the results. Other labs have decided not to enter their reference testing into the computer due to the huge amount of time and effort that it takes to manually enter the results. To facilitate IHS labs entering their reference testing into the laboratory package, a bi-directional interface between the IHS labs and national reference labs needs to be developed and deployed.

**Task Description**

1. Establish communication with Quest and Lab Corp Laboratories and discuss the proposed use of the Instrument Manager as the mechanism to send HL7 message.
2. Agree on the format of the HL7 messages. Request Data Innovations to write drivers for each reference laboratory.
3. Develop a mechanism to connect the reference laboratories (via current reference lab PC's in the labs) to the Instrument Manager.
4. Build all RPMS files necessary for interfacing reference labs (laboratory test file, autoinstrument

file, load/worklist file).

5. Send messages from the reference laboratories to the IHS laboratories to the Instrument Manager.

**Comments**

This may be provided by a VA patch.



**Lab Package Reference Range Development**

# A-019

**Project Category:** Applications Clinical**FY01 Project Type:** Enhancement**Contact:** Moore, Catherine**Sponsor:** Lab PSG

This project focuses on the correspondence of laboratory reference ranges to patient results. It involves creating a mechanism for programming complex reference ranges for laboratory tests based on age and sex and storing the ranges with the results.

**Current Status:** Not Started      **% Complete:** 0%**Actual Begin Date:**      **Estimated Duration:** 3 Months**Staffed By:****Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
1	Sr Programmer	100.00%	3	456 Hours
1	Sr Technical Writer	100.00%	1	152 Hours
1	Verifier	100.00%	1	152 Hours
<b>Totals: 3 Staff</b>				<b>760 Hours</b>

**ITSC FY01 Priority:** 1 - Required**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 98 Legislated**Legislative Drivers:** CLIA 88

CLIA 88 regulations require that reference ranges for laboratory tests reflect this patient data.

**Task Description**

1. Review current method of attaching reference ranges to patient results.
2. Create a program that could be used by the site to define complex reference ranges for each laboratory test based on sex and age.
3. Develop a method to store the reference ranges with the results.

**LOINC IHS-wide Deployment Planning**

# A-011

**Project Category:** Applications Clinical**FY01 Project Type:** New**Contact:** Moore, Catherine**Sponsor:** Lab PSG

This project represents a continuing phase in the LOINC project and is dependent on successful completion of the initial mapping process under #R-008. In this phase, staff begins the education and planning for LOINC deployment to take place in FY02. They also prepare the files, routines, and patches necessary to support RPMS use of LOINC.

**Current Status:** Not Started      **% Complete:** 0%

Dependent on successful completion of the LOINC implementation for GCPR Pilot R-008 and on Sentinel Surveillance Pilot A-108, which will be using LOINC codes.

**Actual Begin Date:**      **Estimated Duration:** 6 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
1	Sr Network Specialist	100.00%	3	456 Hours
1	Jr Programmer	25.00%	6	228 Hours
1	Project Lead	25.00%	6	228 Hours
1	Sr Technical Writer	100.00%	1	152 Hours
<b>Totals: 4 Staff</b>				<b>1,064 Hours</b>

**ITSC FY01 Priority:** 1 - Required**Justification****ITA:** ☒      **RPMS Growth Plan:** ☐**ISAC Goals:** 02 Interoperability  
98 Legislated**Legislative Drivers:** HIPAA**Task Description**

TBD -- will depend on how much of the work performed for GCPR Pilot can be transferred into IHS "gold standard" Lab database.  
Work will include communications plan, cookbook and other user materials.

**Background**

See LOINC information in #R-008 LOINC Implementation for GCPR Pilot

**LOINC Prototype Implementation**

# R-008

**Project Category:** Research & Development GCPR-Related**FY01 Project Type:** Enhancement**Contact:** Moore, Catherine**Sponsor:** GCPR

LOINC provides standardized names and ID codes for identifying laboratory and clinical test results to enable disparate applications and systems to exchange data. A "gold standard" RPMS Lab package will be mapped with the LOINC codes prioritized for use with the GCPR Framework. Under this contract, mapping will continue as necessary beyond GCPR, but IHS-wide LOINC deployment will be planned and implemented under #A-011.

**Current Status:** Completed      **% Complete:** 100%**Actual Begin Date:** 23-Oct-00      **Estimated Duration:** 6 Months      **Date Complete** 30-Mar-01**Staffed By:** Both**Estimated InHouse FY01 Staffing Requirements**

#	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
1	Sr User Support	15.00%	6	137 Hours
<b>Totals: 1 Staff</b>				<b>137 Hours</b>

**Other Direct Costs (ODCs) Estimate**

<u>ODC Category</u>	<u>Description</u>	<u>Total Cost</u>
Contractor Services	EDS (Jennifer Bailey subcontract)	\$61,200
<b>Total:</b>		<b>\$61,200</b>

**ITSC FY01 Priority:** 2 - High**Justification****ITA:** ☒      **RPMS Growth Plan:** ☐

**ISAC Goals:** 02 Interoperability  
98 Legislated

**Legislative Drivers:** HIPAA

LOINC has become the nationally-accepted standard codeset for Laboratory values. Far more important than LOINC's role in HL7 version 3 is its role in HIPAA Claims and other Attachments. Logical Observations Identifiers Names and Codes is planned to be the primary coding schema for identifying data included in ultimately dozens of electronic attachments.

**Task Description**

1. Map RPMS Lab Package tests to LOINC codes.
2. Develop LOINC patch for IHS.
3. Design and create Fileman file and transfer all entries from file 60 to this conversion file.
4. Write routines like the 5.2 conversion routine to auto load potential matched names with LOINC.
5. Modify Data Dictionary of V lab-related files to accept and cross-reference by LOINC codes.
6. Write routines to populate V Lab, V Micro, V BB with Loinc code based on site/specimen.
7. Create the additional patch releases through the normal SAC process.
8. Apply to the pilot database.
9. Transfer codes to GCPR Pilot database.

**Background**

Logical Observations Identifiers Names and Codes (LOINC) is part of a larger movement that seeks to overcome a longstanding “islands of information” problem in health care by developing universal identifiers (names and codes), reference terminologies, and vocabularies for use in exchanging, integrating, and analyzing data. Although it has wider implications, the development of LOINC to date has focused on developing standard codes and names for laboratory test results.

One of the key issues LOINC is intended to address arises from the lack of consistency in test naming conventions from lab to lab, a condition that complicates the process of interfacing and exchanging laboratory data. Beyond the simple ability to communicate test result data between systems is the possibility that LOINC may facilitate the dissemination of medical expertise throughout a network.

First released in April 1996, LOINC quickly met with strong interest and has been endorsed or adopted by a broad spectrum of organizations, including the College of American Pathologists (CAP), American Clinical Laboratory Association, and recently the Centers for Disease Control and Prevention (CDC). The aim is to facilitate the exchange and pooling of results, such as blood hemoglobin, serum potassium, or vital signs for clinical care, outcomes management, and research.

As part of the IHS Division of Information Resources’s (DIR) mandate from the Information Systems Advisory Committee (ISAC) to achieve RPMS interoperability, IHS is planning to use LOINC as its standard in collecting and storing laboratory data within its systems, and exchanging those data via any type of interface, e.g. LEDI, reference laboratory interfaces, etc. (See #A-011 LOINC IHS Deployment Planning)

**Master Patient Index (MPI) Evaluation**

# I-004

**Project Category:** Infrastructure General**FY01 Project Type:** Continuation**Contact:** Mayhew, Timothy

A Master Person Index (MPI)/Master Person Information Locator (MPIL) will provide an index of patients (MPI) within the IHS enterprise, and information on sites which hold information on those patients (MPIL). The IHS MPI is also expected to serve as the storage location for the national provider ID, a unique identifier of all health care providers required by HIPAA that is expected to be implemented during FY2000 (see #I-015 National Provider ID Implementation). The term Master Person Index (MPI) is defined as a dynamic, secured directory of uniquely identifiable patients and "pointers" to where respective medical and insurance data about those patients can be located. An MPI can be characterized as: Consisting of a set of patient data that is used strictly and exclusively for coordinated and consistent patient identification; and not serving as a repository for medical records. This project focuses on identifying IHS's requirements for an MPI, evaluating available technical solutions, making recommendations for implementation, and implementing a solution.

**Current Status: In Progress**      **% Complete:** 61%**Actual Begin Date:** 03-Jan-00      **Estimated Duration:** 18 Months**Staffed By:** Both**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
1	Sr Database Administ	25.00%	12	456 Hours
1	Jr Programmer	25.00%	12	456 Hours
2	Sr Programmer	25.00%	12	912 Hours
1	Project Lead	25.00%	12	456 Hours
1	Jr Systems Analyst	25.00%	12	456 Hours
1	Sr Technical Writer	25.00%	12	456 Hours
1	Verifier	25.00%	12	456 Hours
<b>Totals: 8 Staff</b>				<b>3,648 Hours</b>

**Other Direct Costs (ODCs) Estimate**

ODC Category	Description	Total Cost
Contractor Services	Mitretek	\$114,000
<b>Total:</b>		<b>\$114,000</b>

**ITSC FY01 Priority:** 1 - Required**Justification****ITA:** ☒      **RPMS Growth Plan:** ☒

**ISAC Goals:** 01 Billing  
 02 Interoperability  
 09 Decision Support  
 10 Comparability of Public Health

**Legislative Drivers:** HIPAA

11 Data Quality  
98 Legislated

**Task Description**

1. Monitor GCPR/MPI activity and provide input relating to RPMS and the NPIRS database.
2. Upon notification from GCPR workgroup, implement necessary modifications in RPMS and the NPIRS database.
  - Software and hardware identification and acquisition.
  - Software and hardware installation and testing.
  - Development and implementation of PIDS (client and server).
  - HDD mapping and loading for ADT, Pharmacy, Lab and Text data as well as IHS and facility specific code sets.
  - EMPI data loading, with patients from Pilot site.
  - Implementation of RPMS API using PIDS
  - Ensure that the IHS and GCPR MPI can be updated with new admission, discharge, and transfer (ADT) patient information.
  - Ensure that specific trigger events in RPMS will generate transactions to update the IHS and GCPR MPIs.
  - Ensure interoperability through the use of OMG CORBAMed's Person Identification Services (PIDS) for the IHS MPI.
  - Ensure the development of IHS data standards through the population of an IHS and GCPR Health Data Dictionary (HDD) with demographic, laboratory, pharmacy, and textual code sets and data based upon a government reference terminology model.

**Background**

As a directory, the MPI can exist within a single facility, a region, or at a national level. At a minimum, an MPI must provide pointers or locators to patient medical information that should be reasonably available and, when automated, accessible using real time, interactive information technology. The term EMPI refers to an MPI that is owned and operated by an enterprise (e.g., healthcare business entity such as a hospital system, a group practice, or a health care plan).

Persons that are contained in an EMPI may be identified in more than one system across multiple organizations in a variety of settings over time. Large, complex healthcare systems such as IHS, Department of Defense (DoD), and Veterans Affairs (VA), may employ more than one EMPI within and across their respective agencies. If more than one EMPI is in place, then the agencies must establish a policy for handling people who have activity in more than one system.

**Comments**

There may be some duplication of staff estimates with I-015 National Provider ID Implementation. There will be additional substantial costs associated with purchased an MPI product.

**National Drug File (NDF) V. 4.0 Distribution**

# A-047

**Project Category:** Applications Clinical**FY01 Project Type:** Continuation**Contact:** Moore, Edgar**Sponsor:** Pharmacy PSG

NDF provides standardization of local drug files within each service unit & Area. Keeping current with the latest versions of the NDF is vital as it provides standardization of the local drug files within each service unit/area. This particular version of the NDF has a new design of the National Drug files that will lay the foundation for timely data releases by the Pharmacy Benefits Management (PBM), which will make frequent updating of the NDF easier and faster, with minimal time for installation and downtime. This project will make Version 4.0 of the National Drug File (NDF) software package available for general distribution to all IHS pharmacy customers.

**Current Status:** On Hold      **% Complete:** 50%

1/4/01: On hold until after the Pharmacy Point of Sale (POS) is released.

**Actual Begin Date:** 02-Oct-00      **Estimated Duration:** 8 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
1	Jr Programmer	100.00%	7.5	1,140 Hours
1	Sr Programmer	100.00%	7.5	1,140 Hours
<b>Totals: 2 Staff</b>				<b>2,280 Hours</b>

**ITSC FY01 Priority:** 3 - Medium**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 01 Billing  
02 Interoperability**Legislative Drivers:**

Keeping current with the latest versions of the NDF is vital as it provides standardization of the local drug files within each service unit/area. This particular version of the NDF has a new design of the National Drug files that will lay the foundation for timely data releases by the Pharmacy Benefits Management (PBM), which will make frequent updating of the NDF possible with minimal time for installation and downtime.

**Task Description**

1. Determine the IHS list of prerequisite software and software dependencies. Full analysis must be done to determine which packages are required to run the IHS version of this package, and what modifications are needed (if any) to ready the packages for installation, or upgrade. (It is possible that identified prerequisite/required packages will affect the projected timeline and cost of the National Drug File project.)

2. Environment Creation at ASDST for NDF V4.0. Create a new partition/UCI large enough to hold version 4.0 and all supporting software on the ASDST system. This will include identification of all software packages required to run NDF V4.0, determination of space requirements, creation of UCI, and installation of supporting software into the new environment. In addition, access and security for

the environment and software packages will need to be established. (This step may be eliminated if an environment is created previously for prerequisite/required packages.)

3. Installation of Version 4 on ASDST system. All VA patches for NDF V4.0 need to be identified and readied for installation. Install and configure Version 4.0 on the ASDST system. This includes, but is not limited to, backing up of the current environment, securing access to the system, initialization of the environment, restoration of the routines, files, and documentation to the system, installation of patches, and establishing proper security and access following the completion of the restoration.

4. Clinical Programming Team Testing and Verification of NDF V4.0. Verify that all options are functioning properly for NDF V4.0 in the environment established. Verify that the documentation matches the performance of the software, including all interactions that take place with all files and routines outside of NDF V4.0 realm. Document, resolve and re-test any discrepancies identified.

5. Identify and Release Software to Alpha Test Site(s). Install NDF 4.0 and all pre-requisite software to the Alpha System(s). Distribute documentation to all those who will be working with and testing the software on the Alpha System, in addition to providing training if needed. Monitor and document all identified problems. Resolve, re-test, re-package and install fixes for all identified problems. Obtain certification from testers that software is ready to move on to a Beta testing classification.



**Nursing Modifications**# **A-087****Project Category:** Applications Clinical**FY01 Project Type:** Enhancement**Contact:** Cordova, Carlos

The ADT package uses a 24-hour clock, but the Nursing Acuity package uses the shift clock. This project will change the nursing package to a 24-hour clock and link it to the ADT package.

**Current Status:** Not Started      **% Complete:** 0%**Actual Begin Date:**      **Estimated Duration:** 3 Months**Staffed By:****Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
1	Sr Programmer	100.00%	3	456 Hours
1	Project Lead	100.00%	3	456 Hours
1	Verifier	100.00%	1	152 Hours
<b>Totals: 3 Staff</b>				<b>1,064 Hours</b>

**ITSC FY01 Priority:** 4 - Low**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:****Legislative Drivers:**

Since nurses need to enter data in both packages, having two different clocks makes it difficult and confusing, and as a result, time consuming.

**Task Description**

1. Modify the code in the nursing package to accept the 24-hour date/time format.
2. Test the code changes.
3. Verify the changes.
4. Send out a patch for the Nursing Acuity package.

**Patient Chart GUI Evaluation and Deployment**

# A-001

**Project Category:** Applications Clinical**FY01 Project Type:** Enhancement**Contact:** Moore, Catherine

This project will evaluate the existing version of Patient Chart (v. 1.05), a Graphical User Interface (GUI) to RPMS. The alpha and beta phases of the Patient Chart application will be use as a benchmark for the full use of GUI based applications in RPMS and to allow non-RPMS traditional users to assist with the order entry process. The project includes preparation of standards and modifications to SAC to support the GUI and providing a standard deployment, support, and enhancements as an RPMS application.

**Current Status: In Progress**      **% Complete:** 55%**Actual Begin Date:** 01-Nov-00      **Estimated Duration:** 12 Months**Staffed By:** Both**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
1	Sr Management Anal	20.00%	2	61 Hours
1	Sr Programmer	10.00%	12	182 Hours
1	Project Lead	10.00%	12	182 Hours
1	Subject Matter Exper	20.00%	2	61 Hours
1	Sr Technical Writer	25.00%	3	114 Hours
1	Sr Training Specialist	10.00%	8	122 Hours
<b>Totals: 6 Staff</b>				<b>722 Hours</b>

**ITSC FY01 Priority:** 3 - Medium**Justification****ITA:** ☒      **RPMS Growth Plan:** ☐**ISAC Goals:** 07 GUI**Legislative Drivers:** ADA

A web-accessible patient record is a goal for the IHS user community and also will meet IHS requirements for the Government Computer-based Patient Record (GCPR) Framework Project.

**Task Description**

1. implementation and feedback. Install and configure Patient Chart at a number of alpha and beta sites. Establish proper installation contacts and assist with site training process. Review and modify existing documentation;
2. Implementation of documentation. Have current documentation reviewed for completeness;
3. Deployment, support and enhancements. Establish direction for the full deployment, installation, support, training and modifications to activate the Patient Chart on appropriate workstations.

**Patient Drug Education Database**

# A-110

**Project Category:** Applications Clinical**FY01 Project Type:** New**Contact:** Moore, Edgar

This project will offer a means where by a patient can be provided a printed medication information sheet, or "monograph," for each of their prescription drugs. The monograph can be printed at various points within the outpatient pharmacy package to enable easy access for the pharmacist. Methods of printing will include printing by patient, by drug name, or as new prescriptions are filled. Quarterly and monthly updates to the Patient Drug Education Database are essential to providing the most up to date information available for the monographs, and will be an on going support portion of this project.

**Current Status:** In Testing      **% Complete:** 90%**Actual Begin Date:** 07-Mar-01      **Estimated Duration:** 3 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
1	Jr Programmer	20.00%	3	91 Hours
1	Sr Programmer	30.00%	3	137 Hours
1	Verifier	5.00%	1	8 Hours
<b>Totals: 3 Staff</b>				<b>236 Hours</b>

**Other Direct Costs (ODCs) Estimate**

ODC Category	Description	Total Cost
Services	Purchase of First DataBank Patient Drug Education Database, with quarterly and monthly updates	\$0
<b>Total:</b>		<b>\$0</b>

**ITSC FY01 Priority:** 3 - Medium**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:****Legislative Drivers:**

This project needs to be done to more fully comply with the patient drug education requirements established by federal laws (the Omnibus Reconciliation Acts of 1987 and 1990 [OBRA '87 and OBRA '90]) and various accreditation bodies (such as the Joint Commission on Accreditation of Health Organizations [JCAHO]). The Patient Drug Education Database information sheets (monograph) assist pharmacists fulfill OBRA '90 patient education requirements with the exception of documenting the number of refills available. By including the possible side effects section on the information sheet (monograph), the pharmacist is assisted in fulfilling the requirements of OBRA '87 for nursing home patients as well. In addition, the information sheet is an instrumental way of providing the patient vital information concerning the medications they are using and allows for easy and quick reference as questions arise at a later time.

**Task Description**

1. Establish a contract, and obtain Patient Drug Education Database files from First DataBank for the quarterly and monthly Patient Drug Education Database updates.
2. Fully analyze First DataBank files and establish a means of storing and updating Patient Drug information within the working environment of outpatient pharmacy for both the quarterly and monthly updates. (Quarterly updates are in full file format, while monthly files are incremental and must be worked in differently.)
3. Complete alterations to the existing Outpatient Pharmacy options that will allow and prompt for the printing of the patient information sheet (monograph).
4. Fully analyze required elements on the patient information sheet, including copyright and expiration information, consult with PSG on IHS needed elements, and create a function to print the proper medication sheet as required.
5. Complete in house testing, identify test sites, package software and data files for distribution, follow up on testing results, make necessary adjustments, distribute software nationwide, and provide on going support.

**Patient Information Management System (PIMS)**

# A-100

**Project Category:** Applications Patient Administrative **FY01 Project Type:** Enhancement**Contact:** Fels, Linda

The Patient Information Management System (PIMS) version 5.3 will be released in three phases. The first phase is a small enhancement to the current Medical Administration Services (MAS) v5.0 application. The enhancement is part of released MAS patch #5 and allows sites to create Primary Care Component (PCC) visits when checking patients in for appointments. Phase II will be the release of DPT version 5.3. This release will include the new data dictionary for the VA Patient file (#2) and the Sensitive Patient Tracking module. The early release of file 2 gives other developers the opportunity to work with the most current version of this basic file. Phase III will be the complete release of PIMS version 5.3 including Admission/Discharge/Transfer (ADT) and Clinic Scheduling with the Primary Care Management Module (PCMM).

**Current Status:** In Progress **% Complete:** 60%**Actual Begin Date:** 01-Apr-00 **Estimated Duration:** 14 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
2	Sr Programmer	80.00%	12	2,918 Hours
1	Sr Technical Writer	25.00%	2	76 Hours
1	Verifier	10.00%	2	30 Hours
<b>Totals: 4 Staff</b>				<b>3,025 Hours</b>

**ITSC FY01 Priority:** 2 - High**Justification****ITA:** ☐ **RPMS Growth Plan:** ☐

**ISAC Goals:** 09 Decision Support  
13 Administrative Environment

**Legislative Drivers:**

The PIMS incorporates enhancements to several RPMS functions and packages including Admission-Discharge-Transfer, Scheduling, Primary Care Management Module, and the Ambulatory Care Reporting Project. Enhancements will provide, for instance, up-to-date online patient information, patient data consistency check, and improved cost recovery for care.

**Task Description**

1. Identify, research, and ready all prerequisite packages and patches required for PIMS 5.3. At the time of this writing those packages are:  
Kernel v8.0 up to patch #134 sequence 128  
FileMan v22 up to patch #37 sequence 34  
HL7 v1.6 up to patch #58 sequence 51  
Broker v1.1 up to patch 15 sequence 11.
2. Finish modifications/test in IHS environment.
3. Developer verification (SAC Checker and %INDEX).
4. Install in an IHS testing environment accessible by users.

5. Review by selected users (includes alpha test trainers).
6. Make modifications per user review.
7. Last user review & update of on-line documentation.
8. Submit for initial technical verification.
9. Install in alpha test environment; select beta test sites.
10. Alpha test (includes writing of technical manual).
11. Installation at beta test sites.
12. Beta test (includes finalizing technical and user manuals).
13. Release PIMS v5.3.

**Patient Registration v. 7.0**# **A-070****Project Category:** Applications Patient Administrative **FY01 Project Type:** Continuation**Contact:** Lujan, Shirley**Sponsor:** BOAT

Patient Registration 7.0 needs to update demographic data collection. This version will include the grouping of like information on specific pages. The new Patient Registration will also include a major overhaul of the Insurance Eligibility pages.

**Current Status: In Progress**      **% Complete:** 45%**Actual Begin Date:** 02-Oct-00      **Estimated Duration:** 9 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
2	Sr Programmer	100.00%	3	912 Hours
1	Project Lead	100.00%	6	912 Hours
1	Sr Technical Writer	100.00%	1	152 Hours
<b>Totals: 4 Staff</b>				<b>1,976 Hours</b>

**ITSC FY01 Priority:** 2 - High**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 01 Billing**Legislative Drivers:**

These changes will facilitate more rapid and accurate data collection. The Eligibility page changes will improve billing with cleaner and greater information on eligibility.

**Task Description**

1. Revamp eligibility pages.
2. Add documents page.
3. Add summary eligibility page.
4. Test these modifications and verify against SAC standards.

**PCC Enhancements**

# A-082

**Project Category:** Applications Clinical**FY01 Project Type:** Operations & Maintenance**Contact:** Gonzales, Arthur

The Patient Care Component software will be supported and enhanced as requested by the IHS throughout the year. This project addresses the one task order currently in place to provide the list of enhancements listed below in the Task Description section.

**Current Status:** In Progress      **% Complete:** 67%**Actual Begin Date:** 02-Oct-00      **Estimated Duration:** 2 Months**Staffed By:** Outsourced**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
1	Project Lead	5.00%	12	91 Hours
<b>Totals: 1 Staff</b>				<b>91 Hours</b>

**Other Direct Costs (ODCs) Estimate**

ODC Category	Description	Total Cost
Contractor Services	Cimarron Medical Informatics (est.)	\$22,500
<b>Total:</b>		<b>\$22,500</b>

**ITSC FY01 Priority:** 3 - Medium**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 04 Technical Support**Legislative Drivers:**

The Primary Care Component (PCC) is the primary 'doorway' to the RPMS suite of applications and, as such, must be maintained at a level that is current with all the data entry requirements of other packages that rely on it. The changes identified below keep this package in step with the other packages it serves.

**Task Description**

1. Modify the PCC Health Maintenance Reminders functionality.
2. Incorporate in the new Health Maintenance Reminders the capability for providers to modify follow-up dates on an individual basis. Modify PC Data Entry to facilitate entry of "Override Dates" for individual reminders for individual patients.
3. Modify the PCC Statistical Export Record to accommodate up to 9 immunizations per visit.
4. Modify the BMI Overweight and Obesity Prevalence Report to count obese patients in the column of overweight patients in addition to counting them in the column for obese patients.
5. Modify the Provider Data Entry option in PCC to permit providers to enter a cohort of patients for



whom they wish to perform data entry. The user will be able to identify the type of visit, the data elements that he or she wishes to enter for the visits, and then be prompted to enter of the name of a patient or a cohort. If cohort is selected, the system will loop the provider through each patient in the cohort, creating and filing visits following the provider's entry of the pre-selected data items.

6. Develop a report of patients who do not have Diabetes on their PCC Problem List, but who are on a specific Diabetes Register or have a user-selectable number of diagnoses of Diabetes in a user-selectable time period.

7. Modify the PCC 1999 Diabetes Audit to reflect the new and modified data elements and logic of the 2000 Audit. Provide national maintenance and support of this product for a period of one year.

**Comments**

This project will be completed via contractual support from Cimarron Medical Informatics.

**PCC+ Customizable Encounter Form and Health Summary Phase I # A-074****Project Category:** Applications Clinical**FY01 Project Type:** New**Contact:** Cullen, Theresa

PCC+ (PCC Plus) is a new application that enables PCC users to build a customized encounter form in real time for each patient visit that combines the best features of the PCC encounter form, superbill and health summary in one integrated document. These documents are generated locally on a laser printer before each clinic visit, and they fully replace their traditional PCC counterparts. The software was developed initially by ILC, and acquired by IHS for deployment by Full Circle Software. IHS-wide deployment past the beta certification stage, including on-site evaluation surveys, training and implementation support, will be continued under #A-112 PCC+ Implementation.

There are four main objectives for this project:

1. Implement one encounter form for each site, one standard form. Additional forms will be developed after the first form has been successfully tested and implemented.
2. Implement a new version of the Health Summary to be printed with encounter forms.
3. Train superusers how to customize forms and how to develop additional forms. The superusers will train appropriate other local staff regarding maintenance and changes to the Encounter Form.
4. Initiate necessary process/workflow changes to achieve maximum value from this new technology.

**Current Status:** In Testing      **% Complete:** 90%**Actual Begin Date:** 03-Jul-00      **Estimated Duration:** 12 Months**Staffed By:** Outsourced**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
1	Project Lead	10.00%	12	182 Hours
<b>Totals: 1 Staff</b>				<b>182 Hours</b>

**Other Direct Costs (ODCs) Estimate**

<u>ODC Category</u>	<u>Description</u>	<u>Total Cost</u>
Contractor Services	Full Circle Phase I	\$105,372
Contractor Services	Full Circle Phase II and III	\$633,984
<b>Total:</b>		<b>\$739,356</b>

**ITSC FY01 Priority:** 2 - High**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐

**ISAC Goals:** 01 Billing  
 09 Decision Support  
 11 Data Quality

**Legislative Drivers:**

The IHS has been using the same encounter form and process for over 30 years. Technologies both in the medical and the IT worlds have been improving and evolving to allow for better capture of

data and more comprehensive medical records. The IHS has not implemented or kept up with some of the new advances in technology. Also new requirements for billing and managed care have appeared, but better technology to support these requirements has not yet been fully developed.

**Task Description**

Phase I: The Encounter Form/Health Summary will be developed and implemented in two alpha sites, Warm springs and Crowe.

1. Program the Encounter Form, including research and development on how to best integrate the form into a clinic's operational environment.
2. Develop ability to extract historical data from RPMS and create User Preferences.
3. Develop ability for sites to customize encounter forms.
4. Develop a training course along with curriculum and training manual.
5. Develop technical process and guidelines for pre-implementation, customization, hardware purchase, and implementation steps.
6. Develop operational guidelines for workflow review, project planning, pre-implementation and implementation steps.

Phase II: Install the Encounter Form into three beta sites -- GIMC, UIHS, and Puyallup.

1. Perform additional research and gather additional requirements on implementing the encounter form into the various different clinic settings, such as small clinics vs large multi-clinic facilities.
2. Develop additional functionality to accommodate variances and to ensure that basic operational needs are covered.
3. Refine documentation for training.
4. Update/change training curriculum.
5. Review, verify, and update technical process and guidelines for pre-implementation, set up, hardware purchase, and implementation.
6. Review, verify, and update processes for operational guidelines for workflow review, project planning, pre-implementation, and implementation steps.
7. Develop process for implementing enhancements (patches) for ongoing production sites.
8. Update alpha and beta sites with production version of software.

Phase III: Implement production system into 48 sites, assuming 4 per month. Each implementation will consist of a pre-implementation meeting, hardware order, hardware configuration, monthly training, site installation, and post-installation follow-up.

**Background**

This package is unique in a variety of ways and will take the combined efforts of different segments of facility staff, from IT to medical records to clinicians, to utilize it to its fullest potential. Some business processes will need to be changed at the participating sites. PCC data will need to be evaluated for quality and changed as needed. Performance metrics will need to be identified to track improvement. Clinicians and others will need to work together to evaluate and possibly redesign templates to satisfy both clinical and business office needs.

From a technical perspective, most of the actual computing is done outside of the traditional M/PCC environment by background processes in both the MUMPS and Windows environment. The overall process is further complicated by multiple servers/operating systems and complex connectivity issues. Package maintenance for PCC+ will be more time consuming, complex, and diverse than is typically seen with other RPMS applications.

On the other hand, the potential benefits of a site's implementing PCC+ are significant. The initial experience by alpha and beta sites with PCC+ suggests that extra effort will be required to implement and support the system. However, the improved clinical documentation and coding, improved staff productivity, and increased third party collections experienced by sites should compensate. No other PCC application, with the possible exception of the Health Summary, has a greater effect on providers, coders, and the overall system of care.

**Comments**

This project is under contract to Full Circle (formerly ILC) whose staffing includes the following functions: Project Oversight; Project Management; Programming; Documentation Development

The ILC software can be used to encourage process changes needed to improve timeliness and accuracy of data input into RPMS. When the patient is checked into the clinic, the event triggers RPMS to send the patient information (Health Summary and Action Profile) to a Microsoft NT servers on the network. On the server, the data from RPMS is merged into a Microsoft Word template. The resulting form is printed on the nearest network printer (to the clinic requesting the information). Additionally, since the provider has completed the form's superbill/chargemaster section, the PCC A clerk at the Point of Care (POC) can input the patient data as the patient is leaving the clinic. By checking in the patient a visit control number is input into RPMS. This allows tracking of the data input of PCC forms, dispensing of drugs without the pharmacy needing the chart and billing to be processed the same day.

**PCC+ Implementation Phase II**

# A-112

**Project Category:** Applications Clinical**FY01 Project Type:** Continuation**Contact:** Cullen, Theresa

PCC+ (PCC Plus) is a new application being released for IHS-wide deployment in July 2001 that enables PCC users to build a customized encounter form in real time for each patient visit that combines the best features of the PCC encounter form, superbill and health summary in one integrated document. These documents are generated locally on a laser printer before each clinic visit, and they fully replace their traditional PCC counterparts.

This project is a continuation of #A-074. The IHS-wide implementation effort will be very substantial. This package is unique in a variety of ways and will take the combined efforts of different segments of facility staff, from IT to medical records to clinicians, to utilize it to its fullest potential. Some business processes will need to be changed at the participating sites. PCC data will need to be evaluated for quality and changed as needed. Performance metrics will need to be identified to track improvement. Clinicians and others will need to work together to evaluate and possibly redesign templates to satisfy both clinical and business office needs.

ITSC is aiming to have at least two sites within each of the 12 Areas ready for PCC+ implementation by December 2001.

**Current Status:** In Progress      **% Complete:** 5%**Actual Begin Date:** 01-May-01      **Estimated Duration:** 9 Months**Staffed By:** Both**Estimated InHouse FY01 Staffing Requirements**

#	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
1	Project Lead	20.00%	9	274 Hours
1	Sr Management Anal	20.00%	9	274 Hours
1	Jr Training Specialist	15.00%	9	205 Hours
1	Project Manager	5.00%	9	68 Hours
<b>Totals: 4 Staff</b>				<b>821 Hours</b>

**Other Direct Costs (ODCs) Estimate**

<u>ODC Category</u>	<u>Description</u>	<u>Total Cost</u>
Contractor Services	Full Circle and Mitretek (hours & \$\$ TBD)	\$0
<b>Total:</b>		<b>\$0</b>

**ITSC FY01 Priority:** 2 - High**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐

**ISAC Goals:** 01 Billing  
 09 Decision Support  
 11 Data Quality

**Legislative Drivers:**

The potential benefits of a site's implementing PCC+ are significant. The initial experience by alpha and beta sites with PCC+ suggests that extra effort will be required to implement and support the system. However, the improved clinical documentation and coding, improved staff productivity, and increased third party collections experienced by sites should compensate. No other PCC application, with the possible exception of the Health Summary, has a greater effect on providers, coders, and the overall system of care.

**Task Description**

1. Prepare and distribute system requirements, site implementation recommendations, site evaluation surveys, various checklists and other pre-implementation materials.
2. Develop and communicate web site.
3. Schedule site evaluation surveys, training and installation site visits.
4. Implement site evaluation surveys, training and installation site visits.

**Background**

PCC+ was developed originally by ILC, acquired by IHS, and has been implemented at alpha and beta sites. Beta was certified in May 2001.

**Pharmacy Data Management (PDM)**

# A-109

**Project Category:** Applications Clinical**FY01 Project Type:** New**Contact:** Moore, Edgar**Sponsor:** Pharm PSG

The Pharmacy Data Management (PDM) software provides tools for managing site configurable data in pharmacy files. It includes tools for creating the Pharmacy Orderable Items and maintaining files necessary for the Centralized Patients Records Systems (CPRS). PDM consolidates tools for managing the various pharmacy software products, such as Outpatient Pharmacy and Inpatient Medications, to facilitate the maintenance of files used within these applications. Prior to the release of the Pharmacy Data Management (PDM) software, the maintenance of pharmaceutical items within the local DRUG file (#50) was accomplished using application specific options. PDM provides a single option to maintain this file to facilitate this process.

**Current Status:** On Hold      **% Complete:** 35%

On hold until Pharmacy POS completed.

**Actual Begin Date:** 12-Dec-00      **Estimated Duration:** 7.5 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
1	Jr PC Specialist	100.00%	7.5	1,140 Hours
1	Sr Programmer	100.00%	7.5	1,140 Hours
<b>Totals: 2 Staff</b>				<b>2,280 Hours</b>

**ITSC FY01 Priority:** 3 - Medium**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 11 Data Quality**Legislative Drivers:**

There are multiple purposes for this project. First, PDM will simplify the maintenance of pharmacy files, which should increase accuracy, while decreasing the amount of time required for maintenance. Secondary to this, but just as important, is that this product must be in place prior to Outpatient Pharmacy V. 7.0 and Inpatient Medications V. 5.0 in conjunction with Computerized Patient Records System (CPRS) V. 1.0, can be installed. This project is essential to supporting the decision to align IHS packages with their most current VHA equivalents.

**Task Description**

1. Establish testing environment at HQW for the installation and evaluation of the PDM software package. Ready environment with latest IHS distributed versions of Inpatient and Outpatient pharmacy packages, in addition to applying required VA patches to prepare environment for the PDM installation.
2. Install PDM software in HQW test environment and run fully documented testing on PDM, as well as on the Inpatient and Outpatient pharmacy applications. Note increased functionality, adverse interactions between the packages, or possible decreases in functionality. Verify that the documentation matches the performance of the software, including all interactions that take place with all files and routines outside of PDM. Consult with PSG for guidance as needed to resolve

needed or unneeded options.

3. Package PDM software for release to Alpha site. Distribute documentation needed and provide training when necessary. Aid in installation if requested and monitor results of testing with the site(s) staff. Document and make alterations to software as needed to complete the Alpha site(s) testing. Obtain certification from Alpha test site(s) that software is ready to move on to the Beta testing phase.

4. Identify Beta test sites. Package and distribute software to identified test sites. Monitor and work with Beta test sites on identified problem areas, make necessary alterations to software and documentation, repackage and redistribute software/documentation as needed. Obtain certification from Beta sites that software is ready for general nationwide distribution.

5. Ready software package and documentation for general release. Work with verification on any unfinished requirements, and update PSG and user group on software release. Provide on going maintenance and patches as needed.



**Pharmacy Point of Sale (POS) Project**

# A-103

**Project Category:** Applications Clinical**FY01 Project Type:** Continuation**Contact:** Moore, Edgar

The intent of this project is to increase revenue generation from pharmacy services by providing a means for I/T/U facilities to perform online submittal of pharmacy claims, via a switch company, to third-party payers. This project also includes training and assistance with setup/process/workflow and on going support as necessary. The required NCPDP format for the electronic claims submission will be incorporated as part of this project.

**Current Status:** In Testing      **% Complete:** 85%**Actual Begin Date:** 01-Aug-00      **Estimated Duration:** 12 Months**Staffed By:** Outsourced**Estimated InHouse FY01 Staffing Requirements**

#	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
1	Project Lead	10.00%	12	182 Hours
<b>Totals: 1 Staff</b>				<b>182 Hours</b>

**Other Direct Costs (ODCs) Estimate**

<u>ODC Category</u>	<u>Description</u>	<u>Total Cost</u>
Contractor Services	Full Circle: Phase I	\$20,000
Contractor Services	Full Circle: Phase III	\$122,200
Contractor Services	Full Circle: Phase II	\$147,225
<b>Total:</b>		<b>\$289,425</b>

**ITSC FY01 Priority:** 2 - High**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 01 Billing**Legislative Drivers:**

This point of sale product is expected to increase revenue generation by pharmacy sales.

**Task Description**

Phase II consists of beta testing and development of standard documentation and formats for roll-out to production in Phase III. Phase III is the implementation to production in 50 sites at approximately 4 sites per month. Implementation activities include pre-implementation surveys; equipment order, installation, and testing; training; testing payor formats; testing claim transmission; post installation followup.

**Background**

Many State Medicaid programs and some private insurance have allowed separate billing for pharmaceuticals and dispensing fees. However, several have indicated they will only accept the claims in an electronic format (NCPDP format). The deadline varies with each State, but in the southwest/midwest this deadline is July - September

Portland Area has had a pilot program to generate electronic billing of pharmacy. They are using Daytech software to convert RPMS data into NCPDP formats and then send the claim to Envoy. This option is available for sites, however, there is a charge for the Daytech software (~\$1,100/site).

**Comments**

This project is being done under contract to Full Circle (formerly by Informatix Laboratories) whose staff includes the following positions: Project Oversight; Project Management; Senior Programmer; Pharmacy Lead; Documentation Developer

**Pyxis Implementation**

# A-075

**Project Category:** Applications Clinical**FY01 Project Type:** New**Contact:** Gervais, Carl

This project consists of the development and implementation of an automated interface between the Resource and Patient Management System (RPMS) of the Indian Health Service (IHS) and the Pyxis Supply System. There are four objectives of the interface:

1. To pass patient identification, demographic, and service location data from RPMS to Pyxis as patients are hospitalized or receive outpatient services.
2. To pass medication and other supply information from Pyxis to RPMS as supplies are dispensed through the Pyxis System.
3. To make the supply information received from Pyxis by RPMS available in the RPMS Billing System.
4. To be easily implementable and configurable for local sites.

**Current Status:** In Testing      **% Complete:** 72%**Actual Begin Date:** 01-Sep-00      **Estimated Duration:** 6 Months**Staffed By:** Outsourced**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
1	Project Manager	5.00%	12	91 Hours
1	Project Lead	5.00%	12	91 Hours
<b>Totals: 2 Staff</b>				<b>182 Hours</b>

**Other Direct Costs (ODCs) Estimate**

ODC Category	Description	Total Cost
Contractor Services	Cimarron Medical Informatics	\$45,000
<b>Total:</b>		<b>\$45,000</b>

**ITSC FY01 Priority:** 2 - High**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 01 Billing**Legislative Drivers:**

This interface to the Pyxis software will make it possible for the RPMS Billing System to include supplies, including drugs, that might be associated (based on dates) with the inpatient or outpatient claim being constructed. Admission, bed transfer, or discharge of an inpatient and check-in of an outpatient all will cause messaging exchange between RPMS and Pyxis. This interface will enhance the billing process by ensuring that claims more comprehensively reflect actual costs incurred in patient care.

**Task Description**

1. Cimarron submit Specification and Plan for IHS program groups review and comment.
2. IHS provide a Task Order to Cimarron for development, testing, implementation, and support of

the Interface software. The Task Order shall reflect any revisions to the Specification Document following IHS' program review.

3. Working with Pyxis, Cimarron develop, install, and test the Interface at Northern Navajo Medical Center.
4. With Pyxis, refine Interface as necessary for live implementation.
5. Cimarron develop documentation and provide training to the appropriate groups at NNMC. Implement the Interface in the live environment.
- 6.. With Pyxis, install and implement the Interface at Pine Ridge and Tahlequah Hospitals.
7. Submit software to DIR for Verification and Distribution.
8. Cimarron provide software maintenance and telephone user support through September 30, 2001.

**Comments**

This project is under contract to Cimarron Medical Informatics. Approximately 30 sites have Pyxis supply and pharmacy dispensing machines. The nursing staff select the name of the patient and the quantity and type of item desired and a drawer or cabinet opens allowing the staff to take the item (e.g., IV Tubing).

Process: When patient is checked into a clinic, the check-in process will trigger a RPMS event to send the patient's demographic information, via HL-7 messaging, to the clinic/ward Pyxis unit. The nurse will be able to select the patient from a pull-down list of active patients. If drugs are selected from the pick list, the Pyxis unit sends a HL-7 message with the patient and drug information to the pending file in the outpatient pharmacy package. If a supply is selected, information is sent to a v-supply file for passing to 3rd party billing. After 24 hours (outpatient only) the patient will automatically be removed from the pick list.

**Referred Care Information System (RCIS) Modifications**

# A-086

**Project Category:** Applications Clinical**FY01 Project Type:** Continuation**Contact:** Jarland, Toni**Sponsor:** Managed Care PSG

The Referred Care Information System automates the clinical and administrative management of all referred care, including in-house referrals, referrals to other IHS facilities, and referrals to outside contract providers. This project effort includes two new distributions of the RCIS package that will include major modifications to enhance the "In-house Referral Component" and to provide the ability to print multiple Vendors of the Referral Form. Both distributions will require new User and Technical Manuals.

**Current Status:** In Progress      **% Complete:** 46%**Actual Begin Date:** 02-Oct-00      **Estimated Duration:** 12 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
1	Sr Programmer	100.00%	6	912 Hours
1	Subject Matter Exper	10.00%	6	91 Hours
1	Jr Technical Writer	20.00%	1	30 Hours
1	Verifier	10.00%	1	15 Hours
<b>Totals: 4 Staff</b>				<b>1,049 Hours</b>

**ITSC FY01 Priority:** 3 - Medium**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 01 Billing  
04 Technical Support**Legislative Drivers:**

RCIS gathers essential information that provides timely and accurate referral data on individuals and groups of patients for the key clinical and administrative managers at care delivery sites, IHS Areas, and IHS Headquarters. By tracking information on referred care, the goal of the RCIS is to help ensure that IHS provides appropriate, effective, and high-quality referred care services to American Indian/Alaska Native people at fair and reasonable prices.

**Task Description**

1. Design and program the code modifications.
2. Incorporate the changes into the User and Technical Manuals.
3. Perform testing and verification against SAC standards, make modifications as required, then release.

**RPMS Application Ongoing Support**

# A-048

**Project Category:** Applications General**FY01 Project Type:** Operations & Maintenance**Contact:** Gervais, Carl

This project represents the ongoing support required by all RPMS applications. In addition to the specific package projects detailed throughout this document, RPMS developers and support staff must attend to the continuous stream of user requests for corrections to existing software, guidance in using the packages in the field, assistance (both remote and onsite) in installing and configuring packages and patches as well as using the packages to address site-specific operational processes.

**Current Status: Ongoing (O&M % Complete:** 67%**Actual Begin Date:** 02-Oct-00 **Estimated Duration:** 12 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
4	Jr Programmer	100.00%	12	7,296 Hours
4	Sr Programmer	100.00%	12	7,296 Hours
2	Subject Matter Exper	75.00%	12	2,736 Hours
2	Jr Systems Analyst	100.00%	12	3,648 Hours
1	Verifier	25.00%	12	456 Hours
<b>Totals: 13 Staff</b>				<b>21,432 Hours</b>

**ITSC FY01 Priority:** 2 - High**Justification****ITA:** ☐ **RPMS Growth Plan:** ☐**ISAC Goals:** 04 Technical Support**Legislative Drivers:**

Regardless of what else is taking place in the development of new packages, interfaces, or functionality, users require support in their daily operation of existing packages and operational workgroups require the assistance of developers and project leads to help determine the direction to be taken with their packages. Developers and support staff must attend to these demands on their time and threat them with a high priority.

**Task Description**

Tasks depend upon user and workgroup requirements. They require for instance, troubleshooting problems, extensive communication with users and ITSC management, developing fixes, coordinating activities with workgroups and colleagues, assembling packages for verification and release, and assisting in the documentation process.

**RPMS Growth Plan Integrated Implementation Plan**# **A-009****Project Category:** Applications Clinical**FY01 Project Type:** New**Contact:** Willie, Raymond

The RPMS Growth Plan, developed with consultation with Professional Standards Groups, Information Systems Advisory Council, top management, and program officials, documents the customer expectations and development schedule for RPMS over the next five years. The plan includes annual goals, specific interfaces and functionality, and the use of GOTS and COTS products.

This project will identify and document the schedule, dependencies, interactions with the VA, and plans for evaluating and implementing VA solutions to support implementation of this RPMS Growth Plan.

**Current Status:** Not Started      **% Complete:** 0%**Actual Begin Date:**      **Estimated Duration:** 1 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
1	Sr Management Anal	25.00%	1	38 Hours
2	Project Manager	15.00%	1	46 Hours
1	Project Lead	15.00%	1	23 Hours
1	Sr Systems Analyst	15.00%	1	23 Hours
<b>Totals: 5 Staff</b>				<b>129 Hours</b>

**ITSC FY01 Priority:** 2 - High**Justification****ITA:** ☒      **RPMS Growth Plan:** ☒**ISAC Goals:** 03 Annual Plan**Legislative Drivers:**

With the RPMS Growth Plan in place (upon completion of Project A-007 which plans the growth of the RPMS financial and administrative packages), it will be necessary to plan its implementation. Without an implementation plan, ITSC is not in a position to effectively manage development and maintenance of the RPMS packages, nor can it ensure that the objectives documented in the Growth Plan will be achieved.

**Task Description**

1. Determine workgroup membership.
2. In group meetings, lay out the implementation schedule using MS Project and include dependencies among the projects, milestones, time estimates, and allocation of resources in detail.
3. Publish the document for comment.
4. Use the document to both monitor project status and guide decision-making process.

**Comments**

Completion of this process will be greatly influenced by the result of the # A-016 VA Patch Evaluation project and depends on the growth path for the RPMS financial and administrative packages being determined via project #A-007.



**SQL Interface Evaluation and Implementation Plan**# **I-011****Project Category:** Infrastructure General**FY01 Project Type:** New**Contact:** Loughran, Mike

This project will develop a Structured Query Language Interface (SQLI) to act as middleware between Fileman and an SQL engine. SQL can then be used to query a Fileman database (RPMS) within the "M" environment or from outside using an ODBC driver written specifically for this purpose.

**Current Status:** Not Started      **% Complete:** 0%**Actual Begin Date:**      **Estimated Duration:** 3 Months**Staffed By:** Both**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
1	Sr Programmer	100.00%	3	456 Hours
<b>Totals: 1 Staff</b>				<b>456 Hours</b>

**Other Direct Costs (ODCs) Estimate**

ODC Category	Description	Total Cost
Contractor Services	Consulting	\$1,500
<b>Total:</b>		<b>\$1,500</b>

**ITSC FY01 Priority:** 4 - Low**Justification****ITA:** ☒      **RPMS Growth Plan:** ☐**ISAC Goals:** 02 Interoperability**Legislative Drivers:**

With this capability SQL commands can be used to query a Fileman database (RPMS) within M or from outside the M environment using an ODBC driver.

**Task Description**

1. Map services from the Fileman to SQL.
2. Provide training to HIS personnel on managing SQL definitions in order to modify and extend as necessary for RPMS.

**Background**

Currently RPMS has available with Kernel a Structured Query Language Interface (SQLI) to act as middleware between Fileman and an SQL engine but little work has been done on this capability. KB/SQL is the vendor that developed the interface from VA's Fileman to an SQL system of files implemented in M (formerly Mumps). With this capability SQL commands can be used to query a Fileman database (RPMS) within M or from outside the M environment using an ODBC driver written specifically for this purpose by KB/SQL.

**Standards and Conventions (SAC) Review**# **O-007****Project Category:** Other**FY01 Project Type:** Operations &  
Maintenance**Contact:** Lehman, Linda

Project members will review the Programming Standards And Conventions (SAC) for M development and create an IHS SAC for non-M development using new VA SAC as a starting point.

**Current Status: In Progress**      **% Complete:** 7%**Actual Begin Date:** 16-Feb-01      **Estimated Duration:** 1 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
5	Sr Programmer	10.00%	3	228 Hours
1	Project Lead	40.00%	3	182 Hours
1	Jr Technical Writer	20.00%	1	30 Hours
2	Verifier	10.00%	3	91 Hours
<b>Totals: 9 Staff</b>				<b>532 Hours</b>

**ITSC FY01 Priority:** 2 - High**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 04 Technical Support**Legislative Drivers:****Task Description**

1. Identify core group to review the current IHS standards and the VA standards and make recommendations to the larger group.
2. Conduct a broader review of the core group recommendations among all the RPMS developers and determine from it what changes will be made to the existing standards.
3. Publish and implement the new standards.

**Supply Accounting Management System (SAMS) Certification**

# A-044

**Project Category:** Applications Financial & Admin **FY01 Project Type:** Continuation**Contact:** Starr, Marsha

This project effort will develop and distribute the Supply Accounting Management System (SAMS) software as a fully certified package. The SAMS software needs to be standardized and enhanced across all areas to facilitate management and support. Many Areas are running different variations of the SAMS. This presents a maintenance and support problem as these variations behave somewhat differently or unexpectedly from one Area to another.

With a fully certified version of SAMS, project staff will be able to begin work on the ultimate goal of interfacing the package with the Patient Care Component, Administration and Resource Management Systems, Third Party Billing, Accounts Receivable and Cost Accounting.

**Current Status: On Hold** **% Complete:** 75%

12/18/00: Placed in On-hold status: New COTS solution being developed

**Actual Begin Date:** 01-Sep-00 **Estimated Duration:** 7 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
1	Sr Programmer	100.00%	3	456 Hours
1	Sr Technical Writer	10.00%	1	15 Hours
1	Verifier	10.00%	1	15 Hours
<b>Totals: 3 Staff</b>				<b>486 Hours</b>

**ITSC FY01 Priority:** 3 - Medium**Justification****ITA:** ☐ **RPMS Growth Plan:** ☐**ISAC Goals:** 13 Administrative Environment **Legislative Drivers:**

The SAMS package must be certified before it can be interfaced with the other packages. Interfacing the package supports inventory management by department, billing, quality assurance, and auditing processes necessary to financial accountability.

**Task Description**

1. Evaluate and identify SAC violations and modify routines.
2. Complete user-defined enhancements and other items on Action/Problem task list.
3. Modify user-defined problem areas such as inventory, due-ins and back orders.
4. Modify routines to conform to optimal Mumps coding standards and conventions.
5. Maximize and stabilize the input /process/report functions.

**Supply Accounting Management System (SAMS) Interface Enhancements**# **A-045****Project Category:** Applications Financial & Admin      **FY01 Project Type:** Enhancement**Contact:** Fugatt, Anne

This project is to begin once SAMS is standardized and certified (see A-044). SAMS is to be interfaced with Patient Care Component, Administration and Resource Management Systems, Third Party Billing, Accounts Receivable and Cost Accounting. This project begins with a evaluation and analysis of the interfaces needed and how they can be done effectively to work with the other packages. Based on results of the analysis, the development effort will involve modifying existing code and developing new code as needed to interface with each target package, the extent of which is unknown at this time.

**Current Status:** Not Started      **% Complete:** 0%

This project will be launched as soon as the current SAMS package is certified.

**Actual Begin Date:**      **Estimated Duration:** 9 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
1	Sr Programmer	100.00%	9	1,368 Hours
1	Project Lead	100.00%	9	1,368 Hours
1	Sr Technical Writer	100.00%	1	152 Hours
1	Verifier	100.00%	1	152 Hours
<b>Totals: 4 Staff</b>				<b>3,040 Hours</b>

**ITSC FY01 Priority:** 4 - Low**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 13 Administrative Enviroment      **Legislative Drivers:**

Interfacing will make it possible to keep track of inventory, to bill for supplies, to support quality assurance and auditing, and to give a more accurate picture of supply usage by department.

**Task Description**

1. Evaluate and analyze the interface requirements with each package (3PB, AR, PCC, Cost Accounting, ARMS).
2. Design the interface structure and functionality.
3. Develop the actual interface code, reusing code where possible among the interfaces and using table references where possible.
4. Test and verify interfaces.
5. Deploy and support.

**Third Party Billing V. 3.0 Redesign**

# A-054

**Project Category:** Applications Financial & Admin**FY01 Project Type:** New**Contact:** Lujan, Shirley**Sponsor:** BOAT

This project is the creation of a combination Third Party Billing and Accounts Receivable package, using code wherever possible from the previous separate packages. The development effort is to be completed under contract to Full Circle (formerly Informatix (ILC)).

**Current Status:** On Hold      **% Complete:** 50%**Actual Begin Date:** 02-Oct-00      **Estimated Duration:** 10 Months**Staffed By:** Outsourced**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
1	Project Lead	10.00%	7	106 Hours
1	Sr Technical Writer	100.00%	1	152 Hours
1	Verifier	100.00%	1	152 Hours
<b>Totals: 3 Staff</b>				<b>410 Hours</b>

**Other Direct Costs (ODCs) Estimate**

ODC Category	Description	Total Cost
Contractor Services	Full Circle (two senior programmers)	\$155,000
<b>Total:</b>		<b>\$155,000</b>

**ITSC FY01 Priority:** 2 - High**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 01 Billing**Legislative Drivers:**

This rewrite will enhance the billing process by making it easier to use and improve accuracy of the data interchange between billing and receivables. A cost accounting feature will be included, it will have a new file structure, claim tracking, and new reports (including a report to CORE with an itemized listing of outstanding receivables).

**Task Description**

1. Develop new file structure.
2. Combine Third Party Billing package and Accounts Receivable package, reusing code whenever possible.
3. Develop a Cost Accounting component in the package.
4. Generate new reports for Billing and Accounts Receivable.
5. Develop the What You See Is What You Get (WYSIWYG).

Phase I: January 2001 Rewrite current package to comply with IHS SAC.

Phase II: July 2001 Develop specific enhanced functionality and produce alpha version prototype.

Phase III: September 2001 Implement new system in Alpha.

**Comments**

This project is under contract to Full Circle (formerly Informatix) for services of two senior programmers.

**VA Application Patch Evaluation and Implementation Plan**# **A-016****Project Category:** Applications General**FY01 Project Type:** Operations & Maintenance**Contact:** Willie, Raymond

The intent of this project is to review all RPMS applications and their equivalent VA applications to evaluate the extent of update necessary to bring the RPMS up to the VA version and patch level. The evaluation will also address the extent of outstanding modifications to the RPMS packages which are not covered in their VA equivalents but which must be retained. Project staff will assess the benefits to be derived by the functionality upgrades and weigh the known costs. They will rank the updates by priority and determine schedule and resource needs. They will then determine what upgrades can be performed during FY01 and plan their implementation.

**Current Status:** Not Started      **% Complete:** 0%**Actual Begin Date:**      **Estimated Duration:** 3 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
1	Jr Management Anal	10.00%	3	46 Hours
3	Sr Programmer	50.00%	3	684 Hours
1	Project Lead	10.00%	3	46 Hours
<b>Totals: 5 Staff</b>				<b>775 Hours</b>

**ITSC FY01 Priority:** 2 - High**Justification****ITA:** ☒      **RPMS Growth Plan:** ☒**ISAC Goals:** 04 Technical Support**Legislative Drivers:****Task Description**

1. Assemble workgroup and plan the project work schedule.
2. Obtain the VA patches and assess the coverage and content differences for each package, including the benefits and costs by package of upgrading.
3. As a group, rank the upgrades by package priority and determine FY01 implementation objectives, schedule, and level of required effort.
4. Document and report results of the project to management.

**VHA Initiatives Monitoring**

# I-072

**Project Category:** Infrastructure General**FY01 Project Type:** New**Contact:** McCain, Jim

To assist in meeting its FY01 ITA goal of moving closer to the VHA, IHS will monitor a variety of VHA initiatives for applicability to IHS and potential participation. Initiatives include: 1) Clinical Data Repository Evaluation; 2) Common Tool Set; 3) Corporate Data Registry Evaluation; 4) Lexical Services Project; 5) Patient Record Architecture; and 6) Web-accessible Patient Record Pilot.

**Current Status: Ongoing (O&M % Complete:** 67%**Actual Begin Date:** 02-Oct-00 **Estimated Duration:** 12 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

#	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
1	Project Lead	5.00%	12	91 Hours
<b>Totals: 1 Staff</b>				<b>91 Hours</b>

**ITSC FY01 Priority:** 4 - Low**Justification****ITA:** ☐ **RPMS Growth Plan:** ☐**ISAC Goals:** 15 Partnerships**Legislative Drivers:**

As part of the renewed effort to leverage the VHA IT architecture and ensure the highest level of compatibility and re-use, IHS needs to monitor applicable VHA projects for applicability and possible involvement by IHS.

**Task Description**

1. Establish liaison with VHA project leader.
2. Establish connectivity to online VHA project tools
3. Participate in project meetings and conference calls as applicable and allowed by VHA.
4. Analyze project outcomes for potential re-use or deployment within IHS.
5. If project outcome is deployable in IHS, develop a deployment plan.

**Background**

**Clinical Data Repository:** The VHA's project will consist of multiple phases. The first phase will consist of a contracted study of how best to institute a clinical repository in VHA followed by a cost benefit analysis. Subsequent phases will depend on the outcome of the initial phase. The ultimate goal is to implement a clinical repository that is based on a patient record architecture and supported by a lexicon and lexical services.

**Corporate Data Registry:** The VHA will create a corporate data registry that identifies detailed information about the data in its systems, (a data encyclopedia of sorts). This data registry will provide standards for the development of data elements and will help users in assimilating information. A corporate data registry will provide VHA and IHS with a consistent, sharable set of data across systems and will increase the quality of information captured.



**Lexical Services:** The VHA will create a set of lexical services that supports the exchange of health care information. Complete lexical services not only serve to translate different terms of like conceptual meaning, but more importantly, include conceptual maps that support expressing and transmitting complex and modified concepts while retaining their expressive details.

**PRA:** VHA plans to do an analysis of multiple patient record architectures that can be used to construct a structure that support the exchange of patient information. This project proposes to adopt a patient record architecture (PRA) that can be used as the basis for implementing a clinical repository and that supports the exchange of patient information.

**Common Data Tool Set:** The VHA plans to analyze and select different development tools for use in the creation of applications and databases, both for the development of in-house software and the management of COTS/GOTS software. A standard set of requirements for all products will be developed so that the highest level of interoperability can be achieved. Standards for data access, query and interchange will be defined with the objective that users perceive VISTA as a seamless system. Selection of COTS/GOTS solutions will be weighed against criteria for database features. New in-house products will be developed using the newly identified technologies.

**Web-accessible Patient Record:** A pilot test of a Web-accessible patient record will be conducted by the VHA to determine whether current Web-based technologies can support the sharing of health care information required by VHA (and IHS). This evaluation will look at the major advances being made in Web-based technologies to support information sharing that have the potential to support the secure, reliable, and efficient sharing of health care information.

#### **Comments**

Combines #I-017 Clinical Data Repository, #O-008 Common Tool Set; #I-018 Corporate Data Registry; #I-019 Lexical Services Project; #I-020 Patient Record Architecture; and #A-018 Web-accessible Patient Record Pilot.

**VistAion Evaluation**

# R-020

**Project Category:** Research & Development**FY01 Project Type:** New**Contact:** Gervais, Carl

This project effort will adapt the VistAion graphical user interface (GUI) to the RPMS environment. The effort involves separating the VistAion components to enable IHS sites to customize the GUI according to their site-specific configuration of RPMS packages and version/patch levels. Project staff will also develop an installation process that sites can use to customize their installation.

**Current Status:** Completed      **% Complete:** 100%**Actual Begin Date:** 01-Dec-00      **Estimated Duration:** 4 Months      **Date Complete** 11-Apr-01**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
1	Sr Programmer	100.00%	4	608 Hours
1	Project Lead	10.00%	4	61 Hours
1	Jr Technical Writer	20.00%	1	30 Hours
1	Verifier	10.00%	1	15 Hours
<b>Totals: 4 Staff</b>				<b>714 Hours</b>

**ITSC FY01 Priority:** 4 - Low**Justification****ITA:** ☒      **RPMS Growth Plan:** ☒**ISAC Goals:** 07 GUI  
12 CPR**Legislative Drivers:**

RPMS users have been requesting a graphical user interface for some time and efforts are underway to meet that need. This particular solution offers two advantages over its alternatives: It is compatible with the RPMS Growth Path and ITA directives of maintaining the RPMS suite alignment with the VA software and it can be implemented more rapidly than its alternatives.

**Task Description**

1. Obtain VistAion source software for the GUI.
2. "Burst" the application into separate components and confirm its interaction with the respective packages.
3. Develop an installation process that addresses the components separately.
4. Document the GUI technically and prepare an installation guide for user sites.
5. Verify the software and GUI functionality and documentation, perform alpha and beta testing, fix and modify as necessary, and release.
6. Publicize the availability via the established communication tools of the ITSC (e.g., webpage, newsletter).

**WebTop Beta and Deployment**

# A-012

**Project Category:** Applications Clinical**FY01 Project Type:** Continuation**Contact:** Mayhew, Timothy**Sponsor:** P&N PSG

WebTop V 3.0 is a network-based Graphical User Interface clinical application that provides users with an integrated view of patient care data drawn from multiple facilities through a web browser. The WebTop application was developed for, and used within the VA.

**Current Status: Funding Need: % Complete:** 1%

Waiting for funding.

**Actual Begin Date:** 13-Mar-01 **Estimated Duration:** 9 Months**Staffed By:** Both**Estimated InHouse FY01 Staffing Requirements**

#	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
2	Contractor Support	20.00%	3	182 Hours
1	Project Lead	10.00%	9	137 Hours
1	Jr Technical Writer	25.00%	2	76 Hours
2	Jr Training Specialist	10.00%	9	274 Hours
1	Jr User Support	5.00%	8	61 Hours
<b>Totals: 7 Staff</b>				<b>730 Hours</b>

**Other Direct Costs (ODCs) Estimate**

<u>ODC Category</u>	<u>Description</u>	<u>Total Cost</u>
Contractor Services	SAIC (LOE and cost TBD)	\$0
<b>Total:</b>		<b>\$0</b>

**ITSC FY01 Priority:** 3 - Medium**Justification****ITA:** ☐ **RPMS Growth Plan:** ☐**ISAC Goals:** 07 GUI**Legislative Drivers:**

Drivers for this project are the Physician, Nurse, and Midlevel Provider PSG.

**Task Description**

1. Prepare deployment plan.
2. Develop cookbook and other necessary system and user documentation.
3. Develop training plan and materials.
4. Work with I/T/Us on deploying application.
5. Provide user support as needed.

**Background**

Work done to analyze the requirements needed, and to port this application to RPMS began during FY 2000 with a contract with SAIC.

**WebTop Pilot and Evaluation**

# A-002

**Project Category:** Applications Clinical**FY01 Project Type:** Continuation**Contact:** Mayhew, Timothy**Sponsor:** P&N PSG

WebTop V 3.0 is a network-based Graphical User Interface clinical application that provides users with an integrated view of patient care data drawn from multiple facilities through a web browser. This project will complete porting WebTop 3.0 to RPMS environment; evaluate and verify in development environment; document, train and implement at pilot site.

**Current Status:** Completed      **% Complete:** 100%**Actual Begin Date:** 01-Sep-00      **Estimated Duration:** 5 Months      **Date Complete** 22-Mar-01**Staffed By:** Outsourced**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
1	Project Lead	25.00%	3	114 Hours
<b>Totals: 1 Staff</b>				<b>114 Hours</b>

**Other Direct Costs (ODCs) Estimate**

ODC Category	Description	Total Cost
Contractor Services	SAIC -- additional mod to existing contract	\$63,000
<b>Total:</b>		<b>\$63,000</b>

**ITSC FY01 Priority:** 2 - High**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 07 GUI**Legislative Drivers:****Task Description**

A pilot test of a Web-accessible patient record will be conducted to determine whether current Web-based technologies can support the sharing of health care information required by IHS. The goals of the pilot test will be to:

- Determine the impact of a Web-accessible patient record on the wide area network
- Determine if security needs such as single sign-on, access control, authentication and authorization can be met
- Determine if the Web-based technologies can support efficient access to health care information stored on heterogeneous hardware and software platforms and in heterogeneous databases
- Determine if the implementation of Web-based object technology can provide an adaptable and efficient interface between heterogeneous applications
- Determine if the IHS Master Patient Index (MPI) can be efficiently integrated into a Web-accessible patient record
- Identify and sustain Sponsorship/Development of the Web-accessible patient record

FY01 tasks remaining are to:

- 1) Complete modifications as required by Task Manager
- 2) Implement Web Top Port in contractor and IHS development environments (SAIC)
- 3) Identify alpha test site, prepare site and install Web Top (IHS and SAIC)
- 4) Test and evaluate (IHS and Messaging Team)
- 5) Provide Go/No Go decision on WebTop implementation for IHS

**Background**

Major advances are being made in Web-based technologies to support information sharing. These technologies have the potential to support the secure, reliable and efficient sharing of health care information. Web Top is a DVA product that will allow a Web-based interface to the PCC. The product will be implemented in a development environment prior to installation at a pilot site (Billings Area). During the pilot, the Web Top product will be evaluated for both short-term GCPR Framework pilot needs and for other IHS web-accessible patient record needs as well. A Go/No Go decision will be made by the User Interface team, with possible input from an ad hoc clinical team.

**Comments**

This project was funded in FY00 and is under contract with SAIC.

**X12 Evaluation and Implementation**

# A-003

**Project Category:** Applications Financial & Admin**FY01 Project Type:** Continuation**Contact:** Gonzales, Arthur

This project is an effort to re-engineer the IHS Business process using the most cost effective and efficient method to use Electronic Data Interchange (EDI) to accomplish electronic commerce and ensure compliance to legislation for the Federal Acquisition Act and the Health Insurance Portability and Accountability Act (HIPAA). IHS needs to plan and implement a coordinated approach to identifying, evaluating and implementing X12 standards within its infrastructure.

Electronic commerce services remains critical to IHS revenue generation efforts. Electronic Data Interchange (EDI) is the computer-to-computer exchange of business data in standard formats, resulting in streamlined business transactions. X12 standards facilitate these transactions by establishing a common, uniform business language for computers to communicate across town or around the world. Legislation has decentralized funding for IHS, with each tribe and self-governing sites exhibiting more control over their own funding for different initiatives. It is IHS's desire that each tribe and/or self-governing site be able to take advantage of the electronic commerce solutions.

**Current Status: In Progress**      **% Complete:** 5%**Actual Begin Date:** 01-Jun-01      **Estimated Duration:** 8 Months**Staffed By:** Both**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
1	Jr Programmer	100.00%	8	1,216 Hours
3	Sr Programmer	100.00%	6	2,736 Hours
1	Project Lead	10.00%	8	122 Hours
1	Sr Technical Writer	25.00%	1	38 Hours
1	Verifier	25.00%	1	38 Hours
<b>Totals: 7 Staff</b>				<b>4,150 Hours</b>

**Other Direct Costs (ODCs) Estimate**

ODC Category	Description	Total Cost
Contractor Services	Cimarron Medical Informatics TO # X12	\$0
<b>Total:</b>		<b>\$0</b>

**ITSC FY01 Priority:** 1 - Required**Justification****ITA:** ☒      **RPMS Growth Plan:** ☐**ISAC Goals:** 02 Interoperability  
98 Legislated**Legislative Drivers:** HIPAA

The Federal Acquisition Act requires Agency's and Partners to use Electronic Data Interchange (EDI) and Electronic Funds Transfer (EFT) to conduct financial business transactions. HIPAA

requires Federal Agencies, Contractor, Carriers and Fiscal Intermediaries to use ANSC X12 Standard formats perform electronic healthcare transaction, including medical claim format.

**Task Description**

1. Analyze ongoing HIPAA requirements and determine effect on IHS business process and applications.
2. Establish formal working group to understand both X12 standards and existing IHS EDI-related applications.
3. Develop and implement plan for meeting HIPAA requirements.

**Background**

To extend the scope of IHS information systems between IHS facilities and to include participation by external users and organizations, IHS is focusing on a variety of messaging standards to enable appropriate and secure access to IHS data systems. These standards include HL7 for clinical applications, X.12 for administrative applications, and DICOM for image transmission.

Electronic Data Interchange (EDI) is defined as the inter-process (computer application to computer application) communication of business information in a standardized electronic form. In EDI, information is organized according to a specified format set by both parties, allowing a “hands off” computer transaction that requires no human intervention or rekeying on either end.

ASC X12 standards facilitate electronic interchange relating to such business transactions as order placement and processing, shipping and receiving information, invoicing, and payment and cash application data, and data to and from entities involved in finance, insurance, education, and state and federal governments. X12 standards facilitate business transactions by establishing a common, uniform business language for computers to communicate across town or around the world. With more than 275 transaction sets, X12 standards can be used to electronically conduct nearly every facet of business-to-business operations.

The shipping and transportation industries first developed EDI about 25 years ago to reduce the burden of paperwork, a significant factor in the cost of doing business. Traditional applications of EDI are purchase orders, bills of lading, invoices, shipping orders and payments. However, the development of standards and the widespread use of computers has encouraged the use of EDI in many new arenas including health care insurance and management, record-keeping, financial services, government procurement, and transactions over the Internet.

Organizations adopt EDI for the same reasons they have embraced much of today’s modern technology—enhanced efficiency and increased profits. Benefits of EDI include: a) Administrative cost reduction; b) Value added to products and services through more rapid and accurate information processing; c) Improved inventory control; d) Strategic integration of EDI data and information processing.

In order for EDI to work effectively, standards must be employed to ensure that the information being transmitted is universally acceptable. Standards are structured so that computer programs can translate data from in-house to standard formats and vice versa, either through the use of software at the user location or by the services of value-added network (VAN) communications vendors.

There are several hundred standards currently being used to conduct a wide variety of business-to-business transactions. The Accredited Standards Committee (ASC) X12 standards are designed to work across industry and company boundaries. Changes and updates to the standards are made by

consensus, reflecting the needs of the entire base of EDI users rather than those of a single organization or business sector.



Lead Department:

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**ASDS-NPIRS  
National Patient  
Information Resource  
System Team**

**CORE Reports**# **I-062****Project Category:** Infrastructure NPIRS**FY01 Project Type:** New**Contact:** Klepacki, Stephanie

This effort will create and implement a methodology for storing and distributing CORE information to support financial reporting. The service is currently outsourced through CDC, but it is not well funded. This project will bring it in house.

**Current Status:** Not Started      **% Complete:** 0%**Actual Begin Date:**      **Estimated Duration:** 12 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
2	Sr Database Administ	10.00%	12	365 Hours
1	Sr Network Specialist	10.00%	12	182 Hours
4	Jr Programmer	10.00%	12	730 Hours
2	Sr Programmer	10.00%	12	365 Hours
1	Project Lead	10.00%	12	182 Hours
2	Jr Systems Analyst	10.00%	12	365 Hours
1	Sr Technical Writer	10.00%	12	182 Hours
2	Verifier	10.00%	12	365 Hours
<b>Totals: 15 Staff</b>				<b>2,736 Hours</b>

**ITSC FY01 Priority:** 4 - Low**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 02 Interoperability**Legislative Drivers:**

Bringing this activity in house will increase the amount on local control and hands-on maintenance afforded it.

**Task Description**

1. The Systems analyst will discuss with the I/T/Us to determine what is needed for the project, both hardware and software; develop functional requirements, including the layout of the file and/or report; and obtain written acceptance from the customer prior to any program development occurring.
2. The Systems analyst will write detailed program specifications which identify the logic of the program in pseudo code, including the inputs, process, and outputs of the program.
3. The project will be assigned to a programmer who will be provided with copies of the requirements document and program specifications.
4. During development, the systems analyst will create the test plan and test data that will be used to verify the program is coded correctly. When ready, the program will be tested by the systems analyst

and programmer.

5. The fully tested deliverable will be provided to the customer for acceptance. Upon acceptance, the development of the project will be closed and it will be moved into production in the event the data file/report will be provided periodically, such as annually, to the customer.

**Enterprise Storage Server Implementation**# **I-076****Project Category:** Infrastructure NPIRS**FY01 Project Type:** New**Contact:** Carver, Michael

The National Patient Information Resource System is upgrading its computer system hardware with the integration of an IBM Enterprise Storage Server with the current IBM RS-6000, S7A servers.

**Current Status: Completed**      **% Complete:** 100%**Actual Begin Date:** 02-Oct-00      **Estimated Duration:** 6 Months      **Date Complete****Staffed By:** Both**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
1	Jr Database Administ	10.00%	6	91 Hours
1	Project Lead	30.00%	6	274 Hours
2	Sr Systems Analyst	30.00%	6	547 Hours
<b>Totals: 4 Staff</b>				<b>912 Hours</b>

**Other Direct Costs (ODCs) Estimate**

<u>ODC Category</u>	<u>Description</u>	<u>Total Cost</u>
Hardware	IBM ESS, DLT Library, TSM & Consulting	\$275,000
<b>Total:</b>		<b>\$275,000</b>

**ITSC FY01 Priority:** 3 - Medium**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 11 Data Quality**Legislative Drivers:**

In order for NPIRS to carry out its mission, it was determined that there was a immediate need to expand the storage capacity of the NPIRS computer system. The IBM Enterprise Storage Server F20 has a disk storage capacity of 420 GB to 11.2 TB, which will provide for future scalability

**Task Description**

1. Purchase, delivery and physical setup of the ESS.
2. ESS software installation and system configuration
3. Integration of the ESS with the NPIRS RS-6000, S7A servers.
4. Installation of the DLT Library and Tivoli Storage Manager.
5. SSA disk reconfiguration.

**FY98 and FY99 APC and Inpatient Workload Verification**# **I-071****Project Category:** Infrastructure NPIRS**FY01 Project Type:** Continuation**Contact:** Golis, Paul

Run and post on the NPIRS web site the FY98 and FY99 APC and Inpatient workload reports for the Area Statistical Officers. NPIRS staff will work with the Area Statistical Officers to identify where counts are lower or higher than expected and determine the action to be taken to bring the counts to their expected levels, which could include re-exporting of data.

**Current Status:** In Progress      **% Complete:** 50%**Actual Begin Date:** 02-Oct-00      **Estimated Duration:** 3 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
1	Jr Database Administ	25.00%	3	114 Hours
2	Sr Programmer	50.00%	3	456 Hours
1	Project Lead	50.00%	3	228 Hours
1	Sr Systems Analyst	25.00%	3	114 Hours
2	Verifier	20.00%	3	182 Hours
<b>Totals: 7 Staff</b>				<b>1,094 Hours</b>

**ITSC FY01 Priority:** 3 - Medium**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 11 Data Quality**Legislative Drivers:**

Required by IHS for the annual User Population Verification project and these reports are used to determine facility planning needs.

**Task Description**

Provide a brief description of up to 5 major tasks or categories of effort involved in successfully completing this project:

1. Run the reports for all Areas.
2. Conduct an internal review to determine if any obvious errors with the data are present.
3. Post on the NPIRS web site and notify Areas the reports are available for review.
4. Work with the Area Statistical Officers to identify where counts are lower or higher than expected and determine the action to be taken to bring the counts to their expected levels, which could include re-exporting of data.
5. Ensure all data has been processed and loaded onto DB2 and all outstanding direct APC and Inpatient data issues have been resolved before any workload reports are officially approved by the Area Statistical Officers since any unresolved issues may result in fluctuating counts.

**HACMP Implementation**# **I-070****Project Category:** Infrastructure NPIRS**FY01 Project Type:** Continuation**Contact:** Klepacki, Stephanie

This project will reinstall the HACMP (i.e., high availability) software to automatically switch processing between servers 2 and 3 in the event of system failure. The software was previously purchased, installed, and implemented. However, due to severe problems with data loss due to incompatibilities with the Informix database, HACMP was entirely removed from all NPIRS servers.

**Current Status:** Not Started      **% Complete:** 0%**Actual Begin Date:**      **Estimated Duration:** 2 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
2	Sr Database Administ	30.00%	2	182 Hours
2	Sr Programmer	30.00%	2	182 Hours
1	Sr Technical Writer	10.00%	2	30 Hours
2	Verifier	30.00%	2	182 Hours
<b>Totals: 7 Staff</b>				<b>578 Hours</b>

**ITSC FY01 Priority:** 4 - Low**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:****Legislative Drivers:**

This software allows processing to continue on an alternate server in the event of system failure, which decreases downtime and allows for the optimization of services provided by NPIRS staff.

**Task Description**

1. Develop project plan, including lessons learned from past installation and subsequent problems with data loss.
2. Develop test plan to confirm data is not lost when HACMP is implemented.
3. Install, test, and implement HACMP software.

**Handheld Data Collection**# **R-024****Project Category:** Research & Development**FY01 Project Type:** New**Contact:** Carver, Michael

To successfully automate information collection at point of origination for use upon demand by any IHS data collection system.

**Current Status:** Deferred      **% Complete:** 15%**Actual Begin Date:** 18-Sep-00      **Estimated Duration:** 12 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
1	Jr Database Administ	15.00%	12	274 Hours
1	Jr Network Specialist	15.00%	12	274 Hours
2	Jr Programmer	15.00%	12	547 Hours
1	Sr Programmer	15.00%	12	274 Hours
1	Project Lead	15.00%	12	274 Hours
1	Sr Systems Analyst	15.00%	12	274 Hours
1	Sr Technical Writer	15.00%	12	274 Hours
<b>Totals: 8 Staff</b>				<b>2,189 Hours</b>

**ITSC FY01 Priority:** 4 - Low**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 05 Connectivity**Legislative Drivers:**

Improve data integrity and efficiency in collection.

**Task Description**

1. Evaluate handheld solutions/technologies.
2. Consult with IHS to address needs.
3. System integration assessment.
4. Design, develop, test, and implement application.

**HCFA Interface**

# I-075

**Project Category:** Infrastructure NPIRS**FY01 Project Type:** New**Contact:** Petrakos, Lisa

Write programs to create matching information for IHS patient data versus HCFA eligibility data and to process returned information from HCFA. Update the database to include all new eligibility information received from HCFA and transmit updated information to Area BOC's.

**Current Status:** In Progress      **% Complete:** 92%**Actual Begin Date:** 01-May-00      **Estimated Duration:** 12 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
1	Sr Programmer	30.00%	1	46 Hours
1	Project Lead	10.00%	1	15 Hours
1	Sr Systems Analyst	25.00%	1	38 Hours
<b>Totals: 3 Staff</b>				<b>99 Hours</b>

**ITSC FY01 Priority:** 3 - Medium**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐

**ISAC Goals:** 01 Billing  
02 Interoperability

**Legislative Drivers:**

The basis of the Intra-Agency Agreement HCFA IA# IA-00-38 is to facilitate an exchange of goods, services, and information between IHS and HCFA. IHS will receive Medicare enrollment data from HCFA to establish an accurate database for IHS. In return, IHS will provide HCFA with detailed American Indian specific information to help better identify American Indian beneficiaries in the Enrollment database.

**Task Description**

1. Regression Testing.
2. Alpha Testing with the Billings region.
3. Beta Testing with the Billings region.
4. Roll out to other 11 regions.

**Background**

Phase I – HCFA Medicare Enrollment Data

IHS will create 12 sets of 3 Finder Files. The 3 files are the HIC Finder File, the SSN Finder File, and the ALPHA Finder File. There will be one each per IHS Region, hence the 12 sets, for a total of 36 files.

The 12 ALPHA Finder Files are put on CD and sent to HCFA. HCFA processes each of the 12 ALPHA Finder Files. The 12 "updated" ALPHA Finder Files are put on CD and returned to IHS.

IHS processes each of the "updated" ALPHA Finder Files and appends to the corresponding HIC Finder File previously generated. The 12 "updated" HIC Finder Files and the 12 SSN Finder Files



are put on CD and sent to HCFA.

HCFA processes the 12 sets of 2 Finder Files (total of 24 files) and updates with eligibility information. The 12 "updated" HIC Finder Files and the 12 "updated" SSN Finder Files are returned to IHS.

IHS processes the 24 "updated" Finder Files and creates 12 Area Update Files, one per IHS Region. These files will be sent to the corresponding region, allowing the opportunity to update our eligibility information in our 12 regions.

**Comments**

Agreement was signed in May 2000.

**National Interface Clearinghouse**

# I-069

**Project Category:** Infrastructure NPIRS**FY01 Project Type:** Enhancement**Contact:** Klepacki, Stephanie

This project effort will create central point of contact for all national interfaces with which to transmit data to and/or receive data from all I/T/Us and outside contacts (e.g., HCFA, SSA, and BCBS). For example, the HCFA interface will transmit patient data to HCFA for verification of Medicare eligibility in order to increase revenue generation. This verified data will be provided to the Area offices for distribution to the facilities in order to update their patient eligibility data. This data will then be provided to NPIRS via patient eligibility modifications. This will synchronize the service unit, NPIRS, and HCFA databases.

**Current Status:** Not Started      **% Complete:** 0%

May be addressed as part of DQAT effort.

**Actual Begin Date:**      **Estimated Duration:** 12 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
1	Sr Database Administ	10.00%	12	182 Hours
1	Sr LAN Specialist	10.00%	12	182 Hours
3	Jr Programmer	10.00%	12	547 Hours
2	Sr Programmer	10.00%	12	365 Hours
1	Project Lead	10.00%	12	182 Hours
1	Jr Systems Analyst	10.00%	12	182 Hours
1	Sr Technical Writer	10.00%	12	182 Hours
1	Verifier	10.00%	12	182 Hours
<b>Totals: 11 Staff</b>				<b>2,006 Hours</b>

**ITSC FY01 Priority:** 1 - Required**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐

**ISAC Goals:** 01 Billing  
02 Interoperability

**Legislative Drivers:** GPRA  
HCFA

A centralized point of contact will facilitate implementation and support of current and new interfaces between national, regional, and local systems and distributed RPMS systems in order to improve data integrity, increase revenue, and decrease processing costs incurred by the I/T/Us.

**Task Description**

1. Coordinate interfaces, including requirements analysis, with national interfacing agencies.
2. Develop, test, and implement the interface.
3. Maintain data serving capacity for interface information between interfacing agency and the I/T/Us.



**NPIRS Data Archives Inventory**# **O-033****Project Category:** Other**FY01 Project Type:** New**Contact:** DeLuche, Ryan

Create a comprehensive inventory and catalogue, and to create a database of archived data, and to make the data accessible on CD. The purpose of this project is to preserve the integrity of archived data, and make it usable and readily available to our customers

**Current Status: In Progress**      **% Complete:** 38%**Actual Begin Date:** 24-Jan-01      **Estimated Duration:** 6 Months**Staffed By:** Both**Estimated InHouse FY01 Staffing Requirements****Other Direct Costs (ODCs) Estimate****ITSC FY01 Priority:****Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 11 Data Quality**Legislative Drivers:**

The purpose of this project is to preserve the integrity of archived data, and make it usable and readily available to our customers without continuing the repetitive and labor intensive process of data retrieval from archive tapes. Most of our archived data files are in storage tapes, which begin to degrade after 2 years of storage.

**Task Description**

1. Information in EPAT reports and microfiche need to be converted to a spreadsheet, duplicate and obsolete information must be purged from inventory list.
2. Inventory must be categorized by format; CD, EPAT Tape, Reels, etc. then moved to CD to create a library. A CD writer must be purchased, as we were unable to get ours repaired.
3. Archived Data must be accessible in its own database, for client requests.
4. New Archived data retrieval via Library & Database must be tested.
5. Newly developing procedures for backup and storage of data must be applied to Archived Data.

**Phase I**

- 1) Scan all EPAT reports and create current data archive inventory -Cherie Thomas
- 2) Create a tape inventory spreadsheet -J.Solomon
- 3) Identify and purge obsolete tape files -Ray Fisher  
\*Cannot begin until completion of item 1 above. Once the inventory is compiled and readable, Ray Fisher will go through each item and delete duplicates or files that are not applicable.
- 4) Finalize the archive inventory -Beth Marcum, Cherie, Ray  
\*Unable to begin until completion of item 3 above.

**Phase II**

- 5) Document archive record formats -Beth & Cherie
- \*\*5. & 6. Upon completion of item 4, these can be done simultaneously.
- 6) Copy good tapes to CDs Merge CD inventory into spreadsheet -Beth & Cherie

- \*\*5. & 6. Upon completion of item 4, these can be done simultaneously.
- 7) Create a database for archived data only. --Joe Herrera, Beth & Cherie
- \* Will assign upon completion of #4.

Phase III

- 8) Testing phase--Beth Marcum & Cherie Thomas

Phase IV

- 9) Update Project with new backup procedures currently under development. --Melvin Anzara & Ryan Deluche
- Development of procedures in progress; (see task #1169 M. Anzara, # 1298 L. Petrakos & #1299 R. Deluche)

### **Background**

Most of our archived data files are in storage tapes, which begin to degrade after 2 years of storage. In order to preserve the integrity of our archived data, we must upgrade the storage medium. In addition, we routinely receive requests for historical data. Resolving these requests has been a labor intensive process of data retrieval from archive tapes, many times stored offsite, and in stored in varying formats. The data specific to the request is then loaded into a temporary tablespace and formatted for use. Once the request is resolved, the data is stored again.

To end this repetitive and time consuming routine, and to ensure integrity of historical data, it was decided that getting all archived data formatted and stored in a single type of medium and creating a library from which to pull any requested data was an efficient solution.

### **Comments**

The first phase has been plagued with delay due to the fact that initially the scanner was not working, and when we did get it to work and scanned all the EPAT tape file name information, we could not edit it. We are now looking at keying this data into a spreadsheet. We are also pursuing outsourcing the scanning of microfiche and other components of change for which we do not have the proper equipment. Depending on outsourced work, completion dates will require revision.

**NPIRS Data Movement Automation**# **A-065****Project Category:** Applications NPIRS**FY01 Project Type:** Continuation**Contact:** Klepacki, Stephanie

This project has four major purposes:

1. Develop the format of a single export file, which will combine the existing PCC and registration export files to be used by all RPMS users.
2. Develop the formats of separate export files for non-RPMS users.
3. Identify and utilize standard filenames for all data files exported to ITSC in order to provide for automated processing and archiving of the data.
4. Revise the existing NPIRS automated tracking and update system to accommodate the revised file formats and filenames.

**Current Status:** Cancelled      **% Complete:** 35%**Actual Begin Date:** 01-Feb-00      **Estimated Duration:** 7 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
1	Sr Database Administ	20.00%	7	213 Hours
2	Sr Programmer	20.00%	7	426 Hours
4	Project Lead	20.00%	7	851 Hours
1	Jr Systems Analyst	20.00%	7	213 Hours
1	Sr Technical Writer	10.00%	7	106 Hours
3	Verifier	20.00%	7	638 Hours
<b>Totals: 12 Staff</b>				<b>2,447 Hours</b>

**ITSC FY01 Priority:** 2 - High**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 09 Decision Support      **Legislative Drivers:**  
10 Comparability of Public Health

Completion of this project will:

1. Ensure export files comply with GPRA data tracking requirements.
2. Increase data integrity within the centralized database by tying visit data with registration data.
3. Enable the non-RPMS users (e.g., Tribes such as Norton Sound and CRIHB) to send only the data they are capturing. For example, if they only provide outpatient services, they would not have to send in null values for Inpatient data, as they currently do when they send data in the existing PCC format.
4. Eliminate the need to manually process data files because they would be named according to

standard naming conventions and they would be in a format that allows for automated processing.

**Task Description**

1. Develop the proposed format of a single export file for RPMS users.
2. Develop the proposed formats of separate export files for non-RPMS users.
3. Develop proposed file naming conventions for all data files exported to ITSC.
4. HQ staff (i.e., Edna Paisano and Linda Querec) present proposed formats and file naming conventions to the Indian Health Service/Tribal/Urban (I/T/U) representatives to make them aware of the patient data that is being collected, stored, and reported both in RPMS and NPIRS and to obtain their approval/concurrence. Any problem areas noted during this process will have to be resolved first before the project can continue.
5. Revise, test, and implement the changes agreed upon (in tasks 1 - 4 above) in both RPMS and the NPIRS automated tracking and update system.

**NPIRS FY01 Historic Report/Data Requests**# **A-067****Project Category:** Applications NPIRS**FY01 Project Type:** Continuation**Contact:** Petrakos, Lisa

This project will provide data files and/or reports for historical data as requested by IHS and outside agencies such as Justice, Census, and others. Currently there are several types of these requests that are ongoing:

1. DOJ Tobacco Litigation
2. DOJ Bone Screw Case (ACROMED settlement)
3. Medicare Reporting for Elmer Brewster
4. Epidemiology Cancer Research (IHS)
5. UNM Tumor Registry
6. DASPRO Indian Elder Data
7. Johns Hopkins University Limb Loss Study

**Current Status: Ongoing (O&M % Complete: 67%****Actual Begin Date:** 02-Oct-00 **Estimated Duration:** 12 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

<b>#</b>	<b>Labor Category</b>	<b>%</b>	<b>Months</b>	<b>Total Hours</b>
1	Sr Database Administ	15.00%	12	274 Hours
1	Jr Programmer	40.00%	12	730 Hours
2	Sr Programmer	40.00%	12	1,459 Hours
2	Jr Systems Analyst	40.00%	12	1,459 Hours
1	Sr Technical Writer	10.00%	12	182 Hours
2	Verifier	30.00%	12	1,094 Hours
<b>Totals: 9 Staff</b>				<b>5,198 Hours</b>

**ITSC FY01 Priority:** 3 - Medium**Justification****ITA:** ☐ **RPMS Growth Plan:** ☐**ISAC Goals:** 04 Technical Support**Legislative Drivers:**

This reporting is a responsibility of NPIRS since it is the national IHS database. All requests for data files and/or reports for IHS data are directed to and approved by HQ staff. If HQ staff approves the request, we provide the requester with the data.

**Task Description**

1. Systems analyst discusses with the customer what is needed for the project, develops functional requirements, including the layout of the file and/or report, and obtains written acceptance from the customer prior to any program development occurring.
2. Systems analyst writes detailed program specifications, which identify the logic of the program in



pseudo code, including the inputs, process, and outputs of the program.

3. Project assigned to a programmer for development of the program. The developer is provided with copies of the requirements document and program specifications.

4. During development, the systems analyst creates the test plan, including creating test data that will be used to verify the program is coded correctly. When ready, the program is tested by the systems analyst and programmer.

5. Fully tested deliverable is provided to the customer for acceptance. Upon acceptance, the development of the project is closed and moved into production in the event the data file/report will be provided periodically, such as annually, to the customer.

**NPIRS FY01 Production Tasks**# **A-068****Project Category:** Applications NPIRS**FY01 Project Type:** Operations &  
Maintenance**Contact:** DeLuche, Ryan

The following production tasks are performed by NPIRS staff on a recurring basis:

1. PCC Updates
2. Registration Updates
3. Third Party Billing
4. Dental Updates
5. CHS Updates

**Current Status: Ongoing (O&M % Complete: 67%****Actual Begin Date:** 02-Oct-00 **Estimated Duration:** 12 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
2	Sr Database Administ	20.00%	12	730 Hours
1	Jr Programmer	20.00%	12	365 Hours
2	Sr Programmer	20.00%	12	730 Hours
2	Project Lead	20.00%	12	730 Hours
2	Jr Systems Analyst	20.00%	12	730 Hours
1	Sr Technical Writer	10.00%	12	182 Hours
2	Verifier	20.00%	12	730 Hours
<b>Totals: 12 Staff</b>				<b>4,195 Hours</b>

**ITSC FY01 Priority:** 1 - Required**Justification****ITA:** ☐ **RPMS Growth Plan:** ☐**ISAC Goals:** 01 Billing  
04 Technical Support  
10 Comparability of Public Health  
98 Legislated**Legislative Drivers:** GPRA

These are all services provided by NPIRS staff to support the national database.

**Task Description**

1. Updates.
2. Database Maintenance.
3. Report Modifications.
4. Third Party Billing.
5. Data Audit Reporting and Evaluation.

**Background**

1. PCC Updates – Export files containing PCC data (i.e., direct APC, direct inpatient, and sometimes CHS outpatient, CHS inpatient, and Dental) are received from the Areas and programs are run automatically to update the NPIRS database with the export data. After the updates are complete, the files are archived and the tables that supply data for the Export Files Status report are updated.
2. Registration Updates – Export files containing patient registration data are received from the Areas and programs are run automatically to update the NPIRS database with the export data. After the updates are complete, the files are archived and the tables that supply data for the Export Files Status report are updated.
3. Third Party Billing – Medicare (i.e., BCBS) and/or Medicaid (i.e., AHCCCS) third party billing are performed for several Areas on a monthly basis.
4. Dental Updates – Export files containing dental data are received from the I/T/Us and private contractors to update the NPIRS database with the export data. After the updates are complete, the files are archived.
5. CHS Updates - Export files containing CHS data are received from the I/T/Us and private contractors to update the NPIRS database with the export data. After the updates are complete, the files are archived.

**NPIRS FY01 Web Reports**# **A-071****Project Category:** Applications NPIRS**FY01 Project Type:** Operations &  
Maintenance**Contact:** Golis, Paul

This project will create additional production and on-request reports as requested by customers, including a new requirement for Dental and PHN reports.

**Current Status: Ongoing (O&M % Complete:** 67%**Actual Begin Date:** 02-Oct-00 **Estimated Duration:** 12 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
1	Sr Database Administ	15.00%	12	274 Hours
3	Jr Programmer	40.00%	12	2,189 Hours
2	Sr Programmer	40.00%	12	1,459 Hours
2	Jr Systems Analyst	40.00%	12	1,459 Hours
1	Sr Technical Writer	10.00%	12	182 Hours
2	Verifier	30.00%	12	1,094 Hours
<b>Totals: 11 Staff</b>				<b>6,658 Hours</b>

**ITSC FY01 Priority:** 3 - Medium**Justification****ITA:** ☐ **RPMS Growth Plan:** ☐**ISAC Goals:** 04 Technical Support**Legislative Drivers:**

These reports have been and are requested by our customers.

**Task Description**

1. Systems analyst discusses with the customer what is needed for the project, develops functional requirements, including the layout of the file and/or report, and obtains written acceptance from the customer prior to any program development occurring.
2. Systems analyst writes detailed program specifications, which identify the logic of the program in pseudo code, including the inputs, process, and outputs of the program.
3. Project assigned to a programmer for development of the program. The developer is provided with copies of the requirements document and program specifications.
4. During development, the systems analyst creates the test plan, including creating test data that will be used to verify the program is coded correctly. When ready, the program is tested by the systems analyst and programmer.
5. Fully tested deliverable is provided to the customer for acceptance. Upon acceptance, the

development of the project is closed and moved into production in the event the data file/report will be provided periodically, such as annually, to the customer.

**NPIRS Lifecycle Development Process and Implementation**# **O-018****Project Category:** Other**FY01 Project Type:** Continuation**Contact:** Petrakos, Lisa

Document and formalize requirements analysis through customer acceptance, Including test plans for new as well as existing, to include all NPIRS subsystems and interfaces

**Current Status:** In Progress      **% Complete:** 50%**Actual Begin Date:** 02-Oct-00      **Estimated Duration:** 12 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
1	Jr Systems Analyst	20.00%	12	365 Hours
1	Sr Technical Writer	60.00%	12	1,094 Hours
1	Verifier	40.00%	12	730 Hours
<b>Totals: 3 Staff</b>				<b>2,189 Hours</b>

**ITSC FY01 Priority:** 2 - High**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 03 Annual Plan**Legislative Drivers:****Task Description**

1. Analyze and document current processes, including all NPIRS systems and subsystems.
2. Make selected documentation available from the N PIRS web site.

**NPIRS Web Data Sets**# **A-073****Project Category:** Applications NPIRS**FY01 Project Type:** Continuation**Contact:** Klepacki, Stephanie

This effort will create common data sets for the I/T/Us to be accessed via the Intranet (i.e., NPIRS web site) and also provided to the I/T/Us via compact discs. This may be accomplished with the use of OLAP cubes in Crystal Info. This technology enables the user to view a data set, such as direct Inpatient data and determine the dimensions used to view that data. A user basically builds his/her own query by identifying which dimensions to include, such as fiscal year, ASUFAC, sex of patient, date of service, diagnosis codes, etc. And, the user can apply filters to those dimensions, such as displaying data for only fiscal year 1999 for female patients diagnosed with a specific ICD9 code.

**Current Status: On Hold**      **% Complete:** 15%

These activities are currently being reported under #O-025 Data Quality Action Team (DQAT) project.

**Actual Begin Date:** 01-Aug-00      **Estimated Duration:** 12 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
1	Sr Database Administ	20.00%	12	365 Hours
3	Jr Programmer	30.00%	12	1,642 Hours
2	Sr Programmer	30.00%	12	1,094 Hours
1	Project Lead	30.00%	12	547 Hours
1	Jr Systems Analyst	20.00%	12	365 Hours
1	Sr Technical Writer	10.00%	12	182 Hours
2	Verifier	20.00%	12	730 Hours
<b>Totals: 11 Staff</b>				<b>4,925 Hours</b>

**ITSC FY01 Priority:** 3 - Medium**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 04 Technical Support**Legislative Drivers:**

Completion of this project will improve the reporting capabilities offered by NPIRS in order to empower the I/T/Us to accomplish their workload responsibilities in a more efficient and productive manner.

**Task Description**

1. Purchase hardware and software to support the application.
2. Evaluate security issues and purchase software to implement security procedures.
3. Develop method of data viewing with the I/T/Us.
4. Design OLAP cubes with the I/T/Us.
5. Test and implement OLAP cubes on the NPIRS web site.

**OPH SAS Program Support**# **I-059****Project Category:** Infrastructure NPIRS**FY01 Project Type:** Continuation**Contact:** Petrakos, Lisa

This project involves ongoing SAS support and application development for the Office of Public Health programs. This project represents continuing support of Office of Public Health Programs such as ORYX, GPRA, Epi/Research and behavioral health programs currently use SAS.

**Current Status: Ongoing (O&M % Complete:** 67%**Actual Begin Date:** 02-Oct-00 **Estimated Duration:** 12 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
1	Sr Database Administ	10.00%	12	182 Hours
1	Jr Programmer	50.00%	12	912 Hours
1	Project Lead	50.00%	12	912 Hours
1	Jr Systems Analyst	10.00%	12	182 Hours
1	Sr Technical Writer	10.00%	12	182 Hours
<b>Totals: 5 Staff</b>				<b>2,371 Hours</b>

**ITSC FY01 Priority:** 3 - Medium**Justification****ITA:** ☐ **RPMS Growth Plan:** ☐**ISAC Goals:** 10 Comparability of Public Health **Legislative Drivers:**

This project is required in order to continue this necessary support of these OPH programs.

**Task Description**

1. Identify access/functionality for SAS IntrNet software. Initial focus will target GPRA/ORYX applications, which will then be used as the prototype for other clinical applications.
2. Consult with OPH components to develop a coordinated plan to meet program needs.
3. SAS specialist will work with clinical programs regarding GPRA programming/testing, data movement, database structure, data storage and access.
4. Help to facilitate data and analytical needs for the merging of the two behavioral health programs.



**PCC Patch #5 and AIB Version 3.1 Implementation**# **I-074****Project Category:** Infrastructure NPIRS**FY01 Project Type:** New**Contact:** Klepacki, Stephanie

Make changes required at NPIRS in order to support the implementation of PCC Patch #5 and AIB Version 3.1 implementation.

**Current Status:** In Progress      **% Complete:** 70%**Actual Begin Date:** 01-Feb-01      **Estimated Duration:** 1 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
1	Jr Database Administ	10.00%	1	15 Hours
4	Sr Programmer	30.00%	1	182 Hours
1	Project Lead	30.00%	1	46 Hours
2	Sr Systems Analyst	20.00%	1	61 Hours
<b>Totals: 8 Staff</b>				<b>304 Hours</b>

**ITSC FY01 Priority:** 2 - High**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 09 Decision Support**Legislative Drivers:**

To be able to accept/process the revised PCC export files and all files output from AIB, which will now include an AIB version number in the filename.

**Task Description**

1. Make database changes required to support changes to PCC export file.
2. Make database changes required to support increased length of filenames output from AIB.
3. Make program changes required to support changes to PCC export file.
4. Make program changes required to support increased length of filenames output from AIB.
5. Test and implement revised programs.

**Background**

The PCC export had 13 fields added to it and also had several fields that had their length increased. In conjunction with the changes to PCC and AIB, NPIRS decided to create two new NPIRS tables: (1) Other\_PCC\_Data, which will house PCC records that are not counted as APC, Inpatient, CHS Inpatient, CHS Outpatient, or Dental visits but need to be stored. This includes records such as Events and In-hospital visits. (2) PHN, which will be manually populated on an as-needed basis from the APC and Other\_PCC\_Data tables by running an extract script. This table was created to support efficiently the requirement for PHN reports.

**PHN (Public Health Nursing) Project Phase II**# **A-064****Project Category:** Applications NPIRS**FY01 Project Type:** Continuation**Contact:** Petrakos, Lisa

Phase II is the enhancement phase of this project which includes corrections, additional criteria to improve the processing and reporting requirements for Public Health Nursing.

**Current Status:** In Progress      **% Complete:** 90%**Actual Begin Date:** 11-Feb-00      **Estimated Duration:** 12 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
1	Sr Database Administ	20.00%	12	365 Hours
1	Sr Programmer	20.00%	12	365 Hours
1	Project Lead	20.00%	12	365 Hours
1	Jr Systems Analyst	20.00%	12	365 Hours
1	Sr Technical Writer	10.00%	12	182 Hours
2	Verifier	20.00%	12	730 Hours
<b>Totals: 7 Staff</b>				<b>2,371 Hours</b>

**ITSC FY01 Priority:** 4 - Low**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 09 Decision Support**Legislative Drivers:**

This project will enhance areas of inadequacies in the previous PHN system.

**Task Description**

1. Define the input record.
2. Monitor production process.
3. Modify AIB to accept the new PHN record.
4. Test AIB process.
5. Implement AIB process.

**PVCS Tracker and Version Manager Upgrade and Enhancement # A-101****Project Category:** Applications NPIRS**FY01 Project Type:** Continuation**Contact:** Berry, Sam

Implement an enhancement needed to PVCS Tracker to enable I/T/Us and other users to track Data Center tasks. Also identify other enhancements needed to make both Tracker and Version Manager more efficient applications for tracking tasks and software modifications. This shall include a justification for the enhancements, obtaining a cost estimate from Merant (developer of PVCS Tracker and Version Manager), and approximate time needed for Merant to complete the enhancements.

**Current Status: On Hold % Complete:** 35%

3/1/01: On hold due to higher priority projects.

**Actual Begin Date:** 02-Oct-00 **Estimated Duration:** 3 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
1	Sr Programmer	20.00%	3	91 Hours
1	Project Lead	15.00%	3	68 Hours
1	Sr Technical Writer	10.00%	3	46 Hours
1	Verifier	20.00%	3	91 Hours
<b>Totals: 4 Staff</b>				<b>296 Hours</b>

**ITSC FY01 Priority:** 3 - Medium**Justification****ITA:** ☐ **RPMS Growth Plan:** ☐**ISAC Goals:** 13 Administrative Environment **Legislative Drivers:**

This effort will make PVCS a more efficient and usable application, improve communication with the I/T/Us, and improve workload reporting capabilities.

**Task Description**

1. Schedule a date/time for Merant to be on-site to make the modifications/enhancements.
2. Merant staff will work with NPIRS staff to implement and test the modifications/enhancements.

**Registration Information Inquiry/ Update Screens**# **A-061****Project Category:** Applications NPIRS**FY01 Project Type:** Continuation**Contact:** Klepacki, Stephanie

This effort will be to develop screens that enable authorized NPIRS staff to edit production registration data in order to correct obvious errors with data. For example, patient name is Jane Doe but sex code is M. Users would access this screen, query by patient ID (or some other field) and then change the data, with input from the I/T/Us . Date/time of change should be stored as well as user ID of person who made the change.

**Current Status:** Not Started      **% Complete:** 0%**Actual Begin Date:**      **Estimated Duration:** 9 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
2	Sr Programmer	20.00%	9	547 Hours
1	Project Lead	20.00%	9	274 Hours
1	Jr Systems Analyst	20.00%	9	274 Hours
1	Verifier	20.00%	9	274 Hours
<b>Totals: 5 Staff</b>				<b>1,368 Hours</b>

**ITSC FY01 Priority:** 4 - Low**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:****Legislative Drivers:**

This effort will improve data integrity in the NPIRS database.

**Task Description**

1. Determine data fields that require updating.
2. Design, develop, test, and implement input screens and software.

**Social Security Number (SSN) Verification**# **I-077****Project Category:** Infrastructure NPIRS**FY01 Project Type:** Enhancement**Contact:** Ehrhart, Sue

Work with RPMS to improve the means of verifying SSN information and providing the results back out to the field. Improving the accuracy of the SSN information is a key step to more accurately determining an unduplicated count of the population IHS serves.

**Current Status: In Progress**      **% Complete:** 89%**Actual Begin Date:** 01-Jul-99      **Estimated Duration:** 20 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
2	Sr Programmer	30.00%	12	1,094 Hours
1	Project Lead	5.00%	12	91 Hours
1	Verifier	15.00%	12	274 Hours
<b>Totals: 4 Staff</b>				<b>1,459 Hours</b>

**ITSC FY01 Priority:** 2 - High**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 01 Billing  
11 Data Quality**Legislative Drivers:****Task Description**

1. Establish a connection with Social Security Administration who does the actual verification of the data
2. Provide information to RPMS for distribution to the field
3. Work with Billings (test site) to ensure information arrives in a usable format

**Background**

Capability exists to send and receive data from SSA. Programs exist to send information regarding verified ssns to RPMS. Work is ongoing to polish the product received in the field. Then we will expand the effort to report information regarding ssns that were not verified for one reason or another.

**Standard Code Book (SCB) Table Updates/Modifications via Intranet # A-060****Project Category:** Applications NPIRS**FY01 Project Type:** Continuation**Contact:** Herrera, Joseph

This project will develop an application that enables a user at the HQ level to modify and/or make additions to the Standard Code Tables (SCTs) by accessing the NPIRS web site. Only users assigned specific permissions will be able to edit the data; all other users will only be able to view the SCTs. The application should include features to ensure data is entered in the correct format, where applicable, and should require the user to confirm the changes to be made prior the changes actually being made in the system. For example, a message should be displayed that states: "You have requested to add Facility Code XXXXXX. Are you sure?" [OK/Cancel].

**Current Status:** On Hold      **% Complete:** 80%

5/17/01: Statused as "On Hold" due to DQAT priorities.

**Actual Begin Date:** 02-Oct-00      **Estimated Duration:** 1 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
1	Sr Database Administ	10.00%	1	15 Hours
1	Sr Programmer	10.00%	1	15 Hours
1	Project Lead	10.00%	1	15 Hours
1	Sr Technical Writer	10.00%	1	15 Hours
1	Verifier	10.00%	1	15 Hours
<b>Totals: 5 Staff</b>				<b>76 Hours</b>

**ITSC FY01 Priority:** 4 - Low**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 10      Comparability of Public Health      **Legislative Drivers:**

This effort will streamline the process by eliminating the need for a "middle man" to make the changes since the HQ staff are the ones who actually review and approve all requests for changes to the SCTs. With this application, HQ staff will not only review and approve all changes, they will also make the changes themselves. NPIRS staff will compile all changes that occurred in a monthly report and forward that file to RPMS staff, who will create the patch that is sent to the Area Offices.

**Task Description**

1. Develop procedures, including flowcharts, for making the different types of SCT changes. This information will be provided to HQ staff in order to assist them with making the changes using this application.
2. Coordinate with RPMS staff to identify what information is needed in the file that is sent to them when changes are made to the SCTs, including determining how often changes are to be sent to RPMS.

3. Design and develop the application that will be used to make the changes to the SCTs.
4. Test the application, including testing by HQ staff to ensure they understand how the application works. Implement any changes that were identified as needed during testing.
5. Implement the application at the HQ level and provide this service at NPIRS only as a backup to HQ as directed by HQ.

**User Population Report 1999 Verification**# **A-058****Project Category:** Applications NPIRS**FY01 Project Type:** Continuation**Contact:** Klepacki, Stephanie

This project will create and verify User Population reports to adequately reflect the user populations in the I/T/Us.

**Current Status:** Not Started      **% Complete:** 0%**Actual Begin Date:**      **Estimated Duration:** 12 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

<b>#</b>	<b>Labor Category</b>	<b>%</b>	<b>Months</b>	<b>Total Hours</b>
1	Sr Database Administ	20.00%	12	365 Hours
2	Sr Programmer	20.00%	12	730 Hours
1	Project Lead	20.00%	12	365 Hours
2	Verifier	20.00%	12	730 Hours
<b>Totals: 6 Staff</b>				<b>2,189 Hours</b>

**ITSC FY01 Priority:** 1 - Required**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 10      Comparability of Public Health      **Legislative Drivers:**

These reports are required by IHS.

**Task Description**

1. Incorporate policy modifications as dictated by HQ, such as methodology for unduplicating records.
2. Increase data integrity within the NPIRS database as per input from the I/T/Us.
3. Verify initial User Population counts with the I/T/Us.



Lead Department:

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ASDS-Web  
Application Software  
Development and  
Support Web Team

**Americans with Disabilities Act Web Compliance Initiative # I-025****Project Category:** Infrastructure Web-Related**FY01 Project Type:** New**Contact:** Howe, Joye

All the IHS Internet web pages will require a review to insure they meet usability requirements to comply with P.L. 106-246's amendment to section 508 of the Workforce Investment Act. At a minimum, the first three levels of the entire web site must be readable by devices that read or interpret web page content for the visually challenged. The IHS goal is to insure that all pages are accessible. It is possible that an independent organization, such as the New Mexico Commission for the Blind, will be contracted to evaluate the IHS site after the modifications have been made to verify its usability.

The interface design for the index page and all core sub-level web pages have to be converted from its current jpeg format to html/asp files to increase download speed and functionality. This includes the creation of new graphics, backend adjustments/cleanup, and java scripting. No major reorganization of file/folder structure will be required.

The current Internet site needs to be updated and streamlined to increase the delivery speed of pages and documents as well as to accommodate new web application needs, such as the MYIHS portal and anticipated future expansion.

**Current Status: In Progress % Complete: 50%****Actual Begin Date:** 01-Aug-00 **Estimated Duration:** 6 Months**Staffed By:** Both**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
2	Sr Programmer	40.00%	6	730 Hours
1	Project Lead	100.00%	1	152 Hours
1	Verifier	100.00%	6	912 Hours
<b>Totals: 4 Staff</b>				<b>1,794 Hours</b>

**Other Direct Costs (ODCs) Estimate**

<u>ODC Category</u>	<u>Description</u>	<u>Total Cost</u>
Contractor Services	Contractor TBD	\$0
<b>Total:</b>		<b>\$0</b>

**ITSC FY01 Priority:** 1 - Required**Justification**ITA: ☐ RPMS Growth Plan: ☐**ISAC Goals:** 98 Legislated**Legislative Drivers:** PL 106-246

Public law requires this project be completed in the spring of 2001. All the IHS Internet web pages will require review to insure they meet usability requirements to comply with P.L. 106-246's amendment to section 508 of the Workforce Investment Act.

**Task Description**

1. Perform site analysis by contractor and prepare plan.
2. Modify Internet navigation tools and redesign and implement header and footer. Remove large graphics and use alternate methods to create attractive navigation interface. Convert all navigational links to text-based design for revision speed and convenience.
3. Modify all Internet pages to meet usability and Section 508 requirements.
4. Certify Internet pages after revisions are made.

**Dental Online Training Site**# **A-025****Project Category:** Applications Clinical**FY01 Project Type:** New**Contact:** Kroska, Mark**Sponsor:** Dental PSG

This project involves creating an online, Cold Fusion-based course catalog for the IHS Dental Program at their request.

**Current Status: Completed**      **% Complete:** 100%**Actual Begin Date:** 15-Sep-00      **Estimated Duration:** 3 Months      **Date Complete** 15-Dec-00**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
1	Project Lead	100.00%	3	456 Hours
<b>Totals: 1 Staff</b>				<b>456 Hours</b>

**ITSC FY01 Priority:** 3 - Medium**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 08 Training  
13 Administrative Enviroment**Legislative Drivers:****Task Description**

Per Mark Kroska, this project is completed.

**Dental Recruitment Web Site**

# A-111

**Project Category:** Applications General**FY01 Project Type:** Enhancement**Contact:** Kroska, Mark**Sponsor:** Dental

Redoing the IHS Dental Branch web site to provide employment information to prospective employees and receive contact and resume information from them. This information needs to be maintained – created, stored, listed, updated, deleted.

**Current Status: In Progress**      **% Complete:** 10%**Actual Begin Date:** 25-May-01      **Estimated Duration:** 1.5 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
1	Sr Database Administ	15.00%	1.5	34 Hours
1	Sr Programmer	30.00%	1.5	68 Hours
1	Project Lead	5.00%	1.5	11 Hours
1	Sr Systems Analyst	20.00%	1.5	46 Hours
1	Jr Technical Writer	10.00%	1.5	23 Hours
1	Jr Training Specialist	10.00%	1.5	23 Hours
1	Verifier	10.00%	1.5	23 Hours
<b>Totals: 7 Staff</b>				<b>228 Hours</b>

**ITSC FY01 Priority:** 2 - High**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:****Legislative Drivers:**

Since the IHS WebTeam does not support other vendors application written in ASP, and since this site will be maintained by the WebTeam, this site will be rewritten in ColdFusion.

**Task Description**

1. Discover Dental Branch's requirements
2. Create a design, possibly using story boarding, and get Dental's approval
3. Copy/convert SQL database in Rockville to SQL database in Albuquerque
4. Write and test ColdFusion code to FuseBox standards
5. Train Dental users on the new system

**Comments**

Funded by Dental Group.

**Geographic Information Systems (GIS) Evaluation and Prototype # A-021****Project Category:** Applications General**FY01 Project Type:** Continuation**Contact:** Robar, Jo**Sponsor:** Pittman

This project will provide spatial and cartographic data and analyses to IHS personnel using the web as the primary delivery medium. The project will encompass data collection and verification, database design and support, web-based applications and cataloging systems, user training and various types of spatial and statistical analyses. It will involve communicating to generate GIS awareness, developing user requirements, collecting and validating data, and developing plans for specific applications.

**Current Status: Completed % Complete: 100%****Actual Begin Date:** 03-Apr-00 **Estimated Duration:** 8 Months **Date Complete** 02-Apr-01**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

<b>#</b>	<b>Labor Category</b>	<b>%</b>	<b>Months</b>	<b>Total Hours</b>
1	Sr Database Administ	100.00%	1	152 Hours
1	Sr LAN Specialist	50.00%	1	76 Hours
1	Sr Network Specialist	50.00%	1	76 Hours
1	Sr PC Specialist	50.00%	1	76 Hours
1	Project Lead	25.00%	6	228 Hours
1	Sr Technical Writer	50.00%	1	76 Hours
1	Sr Web Developer	25.00%	4	152 Hours
<b>Totals: 7 Staff</b>				<b>836 Hours</b>

**ITSC FY01 Priority:** 3 - Medium**Justification****ITA:** ☐ **RPMS Growth Plan:** ☐**ISAC Goals:** 02 Interoperability**Legislative Drivers:**

Implementation of the GIS in the IHS environment supports a wide range of research and management efforts to improve health care. GIS makes it possible to track diseases and manage patient care sites and clinical resources using clinical data distributed in a visual and geographical form.

**Task Description**

1. Define and analyze user requirements and available resources including software, hardware, data and web application infrastructure.
2. Develop GIS-awareness programs including web site "brochureware," user training, documentation, and GIS Day activities.
3. Collect, organize and validate data to be cataloged in the GIS system. The data will include NPIRS, RPMS, network and telecomm data, patient records and epidemiological data. The

development of a stable, accurate and well-managed database is key to the project.

4. Design and develop web-based applications that make the aforementioned data accessible to users and allow personnel from any level of the agency to perform spatial analysis. These web-based products would be specifically designed for varying levels of user expertise and a variety of client platforms. The primary goal will be web-based GIS but the data and other analyses would be available to those using desktop GIS products like ESRI's ArchView or ArcInfo.

**Internet Privacy Issues Evaluation and Implementation**

# O-009

**Project Category:** Other**FY01 Project Type:** New**Contact:** Thurman, Len

In this project, the Web Team will develop concise, understandable privacy policy statements, navigational tools, and informational materials that will allow users to access and fully understand privacy issues related to any technologies implemented, such as "cookies," that may impact the user while using the IHS Internet site. This project will bring the agency into compliancy with Public Law, HHS mandates, and, specifically, the COPPA Act of 1998.

**Current Status:** Completed      **% Complete:** 100%**Actual Begin Date:** 02-Oct-00      **Estimated Duration:** 3 Months      **Date Complete** 08-Mar-01**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

#	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
1	Project Lead	25.00%	3	114 Hours
1	Verifier	25.00%	3	114 Hours
<b>Totals: 2 Staff</b>				<b>228 Hours</b>

**ITSC FY01 Priority:** 1 - Required**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 05 Connectivity  
98 Legislated**Legislative Drivers:** COPPA

To bring the agency into compliancy with Public Law, HHS mandates, and, specifically, the COPPA Act of 1998.

**Task Description**

1. Modify the IHS Web Privacy Statement to reflect current HHS as well as agency policies and guidelines.
2. Add a link to the IHS Privacy Statement to all appropriate Intranet/Internet web pages.
3. Certify that all IHS Internet Kids pages meet the Children's Online Privacy Protection Act of 1998 (COPPA).
4. Add a "Good-bye" page to all the Internet Kids pages and external links.

**Background**

Concern over privacy issues is becoming a serious concern as the government moves toward the expansion of "e-gov" services. The IHS, like all other federal agencies, is required to insure its Internet services users have access to information regarding if and how data is being collected.



**ITSC Resource Schedule Center Enhancements Phase II**# **A-023****Project Category:** Applications Financial & Admin**FY01 Project Type:** Enhancement**Contact:** Correa, Orlando

This project effort will identify, evaluate, and implement modifications and enhancements to the web-based ITSC Resource Schedule Center to expand its usefulness. The system is being piloted at the ITSC and is built so that other buildings throughout the IHS can be added at a later date.

**Current Status:** On Hold      **% Complete:** 10%

3/16/01: On hold due to other priorities.

**Actual Begin Date:** 02-Oct-00      **Estimated Duration:** 2 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
1	Sr Database Administ	25.00%	1	38 Hours
1	Sr Programmer	50.00%	1	76 Hours
1	Sr Technical Writer	25.00%	2	76 Hours
<b>Totals: 3 Staff</b>				<b>190 Hours</b>

**ITSC FY01 Priority:** 4 - Low**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 13 Administrative Enviroment      **Legislative Drivers:**

With the rapid adoption of the RSC system by the user community, requests have been made to implement modifications, upgrades, and improvements to the system to make it even more useful for those who are switching to it in lieu of the older paper-based system.

**Task Description**

1. Switch major navigation/filtering functionality from links to a set of pull-down menus for efficient records management.
2. Create mail response to all parties on processing of request. For example, when a record is process, an e-mail will be sent to all e-mail values in the system notifying them of the status of the request (approved, denied, canceled, deteted, etc.
3. Implement additional validation of requests before acceptance to reduce any unnecessary administrative processing.
4. Migrate main request form from an ASP component to a ColdFusion component.
5. Investigate the feasibility of implementing a monthly calendar view.

**Job Vacancies Database Consolidation and Enhancement Phase I # A-026****Project Category:** Applications Financial & Admin **FY01 Project Type:** Continuation**Contact:** Correa, Orlando

This project will consolidate the IHS Job Vacancies Database and the Health Professionals Job Database (HPJD) into one upgraded system. The IHS Job Vacancies Database was developed several years ago to facilitate the IHS recruitment efforts. The original developer is no longer with the agency and the system is long overdue for a major re-work. The Health Professionals Job Database (HPJD) is another jobs database on the IHS Web and also gets a large amount of traffic. Users of the HPJD have been requesting increased functionality to the system much like that currently employed in the IHS Job Vacancies Database. This presents an interesting win-win opportunity to merge both systems into one system, decreasing the associated overhead of having to maintain two separate applications. This project may expand to include Dental, Pharmacy and/or Navajo Jobs Sites.

**Current Status:** Completed **% Complete:** 100%**Actual Begin Date:** 01-Sep-00 **Estimated Duration:** 10 Months **Date Complete** 24-Jan-01**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
1	Sr Database Administ	75.00%	1	114 Hours
1	Sr PC Specialist	25.00%	1	38 Hours
1	Project Lead	25.00%	6	228 Hours
1	Sr Technical Writer	50.00%	2	152 Hours
1	Verifier	50.00%	1	76 Hours
1	Jr Web Developer	50.00%	6	456 Hours
1	Sr Web Developer	50.00%	6	456 Hours
<b>Totals: 7 Staff</b>				<b>1,520 Hours</b>

**ITSC FY01 Priority:** 2 - High**Justification****ITA:** ☐ **RPMS Growth Plan:** ☐**ISAC Goals:** 13 Administrative Enviroment **Legislative Drivers:**

This application is consistently the most visited site throughout the entire IHS Web and the system is in need of consolidation as well as upgrades.

**Task Description**

1. Implement Fusebox standards and role-based security that integrates with the IHS Web Infrastructure.
2. Merge two separate databases into one consolidated database.
3. Upgrade administration section to allow full delegation of permissions, roles, and privileges

through the system by selected administrators.

For JVDB and HPDB merge, a stepped approach has been identified:

- Step 1: Identify 10 jobs for each of us to enter into the development version of the JVDB (Jim). Enter jobs and identify shortcomings, and needed modifications. (all)
- Step 2: Modify development JVDB to handle issues that come up from first round of trying to migrate jobs. (Lando)
- Step 3: Troubleshoot new JVDB functionality. (all)
- Step 4: Identify and divvy up another 20 jobs for each of us to enter into the system (Jim/Darrell). Enter jobs and identify shortcomings, and needed modifications. (all)
- Step 5: Send email out to current HPDB users letting know about the migration and what jobs and job details they have in the HPDB perhaps with a link to the job detail in the HPDB or just a dataset (Jim/Darrell).
- Step 6: Set up user accounts for all users of HPDB for JVDB. (all)
- Step 7: Wait for issues to surface and address with interface/data modifications/updates. (Lando and/or all)

### **Background**

The IHS Job Vacancies Database was developed several years ago to facilitate the IHS recruitment efforts. The original developer is no longer with the agency and the system is long overdue for a major re-work. The Health Professionals Job Database (HPJD) is another jobs database on the IHS Web and also gets a large amount of traffic. Users of the HPJD have been requesting increased functionality to the system much like that currently employed in the IHS Job Vacancies Database. This presents an interesting win-win opportunity to merge both systems into one system, decreasing the associated overhead of having to maintain two separate applications. This project may expand to include Dental, Pharmacy and/or Navajo Jobs Sites.

**Job Vacancies Database Phase II**# **A-106****Project Category:** Applications Web-Related**FY01 Project Type:** Enhancement**Contact:** Correa, Orlando

This project is a continuation of A-026 Job Vacancies Database upgrade and includes pre-Phase II and Phase II activities. This project may expand to include Dental, Pharmacy and/or Navajo Jobs Sites. Includes ongoing marketing efforts to let all IHS, tribal, and urban recruitment and personal staff know of the JVDB and how they can get a job posting account setup to allow them to post their jobs on the IHS Web.

**Current Status:** On Hold      **% Complete:** 5%

3/15/01: On hold due to other priorities.

**Actual Begin Date:** 25-Jan-01      **Estimated Duration:** 8 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements****ITSC FY01 Priority:** 3 - Medium**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 13      Administrative Enviroment      **Legislative Drivers:**

**Links & Document Management System Integration into Web Infrastructure**# **I-022****Project Category:** Infrastructure Web-Related**FY01 Project Type:** Enhancement**Contact:** Beyer, Jim

The Links & Document Management System was developed as a Y2K initiative to facilitate the rapid dissemination of Y2K related information, Internet links, and Government documents. The system was developed before an IHS Web Infrastructure existed. This project will bring the Links & Document Management System into the IHS Web Infrastructure to gain the benefits of leveraging the two systems. Because core components will be modified/upgraded during the infrastructure upgrade, other improvements will be implemented after the critical components are in place.

**Current Status: In Progress**      **% Complete:** 30%**Actual Begin Date:** 15-Nov-00      **Estimated Duration:** 3 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
1	Sr Database Administ	25.00%	1	38 Hours
1	Sr Programmer	100.00%	2	304 Hours
1	Project Lead	10.00%	2	30 Hours
1	Verifier	25.00%	1	38 Hours
<b>Totals: 4 Staff</b>				<b>410 Hours</b>

**ITSC FY01 Priority:** 3 - Medium**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 02 Interoperability**Legislative Drivers:**

The system continually is being requested to manage links and documents for various programs within the IHS. As the user base has grown, so have the demands on and of the system. As such, we look to incorporate the most requested features to continue to provide quality products and services to our customer base.

**Task Description**

1. Move to Universal Login/IHS Web Infrastructure.
2. Move to a recursive surrogate key structure from smart code for increased flexibility and capacity.
3. Implement the Fusebox standard coding practice.
4. Allow users to create/maintain their own categories.
5. Implement Internet/Intranet spanning capability. Move documents to a non-replicated non-web folder.
6. Investigate the feasibility of allowing field developers to call the listing component as a custom tag so that they can just include the links and docs right into their own pages.

**MyIHS Web Portal Enhancements**# **I-023****Project Category:** Infrastructure Web-Related**FY01 Project Type:** Enhancement**Contact:** Correa, Orlando**Sponsor:** Pittman

The MyIHS Portal was built with extreme flexibility in mind. The first phase of the MyIHS Portal, showcased at the ITSC Technology Conference 2000, has proven that the concept of an enterprise portal in government is certainly possible. The next phase in development of the MyIHS Portal will strengthen mechanisms that will allow for extreme load scalability while remaining highly responsive. The second phase will also build new features onto the existing base to give the users even more capabilities. These new features will be in the form of base enhancements as well as new content portlets.

**Current Status:** In Progress      **% Complete:** 34%**Actual Begin Date:** 02-Oct-00      **Estimated Duration:** 3 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
1	Sr Database Administ	100.00%	1	152 Hours
1	Jr Programmer	50.00%	1	76 Hours
1	Sr Programmer	100.00%	3	456 Hours
1	Project Lead	25.00%	3	114 Hours
1	Sr Technical Writer	25.00%	1	38 Hours
1	Verifier	25.00%	1	38 Hours
<b>Totals: 6 Staff</b>				<b>874 Hours</b>

**ITSC FY01 Priority:** 3 - Medium**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 02 Interoperability**Legislative Drivers:**

Once these upgrades are in place, the system will be standardized to the point that future efforts can be focused on providing content pieces. This will give us a vehicle for creating and deploying functional content pieces across the IHS Internet and IHS Intranet web servers more quickly than is currently possible. This will allow our small and already overloaded team to continue to meet the ever-increasing demands of our user base.

**Task Description**

1. Implement structural caching mechanisms, a. minimize database queries where possible and b. create persistent structures for user preferences.
2. Add "New Page" functionality to allow users to create, delete and organize their portal pages. Pages will consist of any number of content portlets and will be available within a user categorization mechanism. The mechanism will most likely employ a pull down menu that contains user-defined categories.

3. Allow portlets to be categorized into system-defined categories. This will allow the system to display the content items available for pages in category groupings. For example, portlets will belong to categories such as LAN/WAN, Web, Administration, Employees, etc.
4. Update existing portlets with common calls to standardized and persistent system and user settings.
5. Write "How to Develop/Program a MyIHS Portlet" documentation for use in developing content portlets for the system.

**Project Management Web-based COTS Evaluation and Implementation**# **A-020****Project Category:** Applications Financial & Admin**FY01 Project Type:** Enhancement**Contact:** Bethea, Linza

ITSC will evaluate Microsoft Project Central and other web-based project management COTS by all project teams. Microsoft Project is the HHS and IHS project management tool standard. The chosen solution will also replace the Account Management System (AMS) that is in use for reporting purposes only. When matured, the system would be able track any project within IHS. PMIS will track project requests, status, and progress, display all requirements, progress, status, notes, memos, participants and their involvement, allow for communication between management, clients, developers, and certification, and use graphical representation for displaying numeric data when possible.

**Current Status:** On Hold**% Complete:** 25%**Actual Begin Date:** 01-Nov-00**Estimated Duration:** 6 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

<b>#</b>	<b><u>Labor Category</u></b>	<b><u>%</u></b>	<b><u>Months</u></b>	<b><u>Total Hours</u></b>
2	Sr Management Anal	15.00%	3	137 Hours
2	Sr Network Specialist	10.00%	3	91 Hours
1	Sr Web Developer	25.00%	2	76 Hours
<b>Totals: 5 Staff</b>				<b>304 Hours</b>

**ITSC FY01 Priority:** 3 - Medium**Justification****ITA:** ☒ **RPMS Growth Plan:** ☐

**ISAC Goals:** 03 Annual Plan  
04 Technical Support  
13 Administrative Enviroment

**Legislative Drivers:**

ITSC needs a centralized, standards-based web-based project management tool to enable project leads to schedule and track progress and DIR management and customers to monitor progress. Solution will also be dependent on Harmonization Project # O-015.

**Task Description**

1. Identify requirements and evaluation criteria.
2. Investigate software options and obtain evaluation copies.
3. Evaluate and document results and recommend solution.

**Comments**

Implementation of this project will depend on successful evaluation of MS Project 2000 and Project Central.



**Web Conference Registration Services Development and Pilot # A-024****Project Category:** Applications Financial & Admin **FY01 Project Type:** New**Contact:** Thurman, Len

In collaboration with the Clinical Support Center (CSC) in Phoenix, AZ, the Web Team will purchase one year of conference registration services from Peopleware, Inc. This project will test, for one year, the feasibility of using off-site web services for conference registration.

**Current Status:** Completed **% Complete:** 100%**Actual Begin Date:** 02-Oct-00 **Estimated Duration:** 12 Months **Date Complete** 15-Dec-00**Staffed By:** Both**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
1	Sr Database Administ	50.00%	1	76 Hours
1	Sr Network Specialist	50.00%	1	76 Hours
1	Jr Programmer	50.00%	1	76 Hours
1	Project Lead	10.00%	12	182 Hours
1	Jr Web Developer	25.00%	3	114 Hours
<b>Totals: 5 Staff</b>				<b>524 Hours</b>

**Other Direct Costs (ODCs) Estimate**

<u>ODC Category</u>	<u>Description</u>	<u>Total Cost</u>
Software	Peopleware software (cost TBD)	\$0
<b>Total:</b>		<b>\$0</b>

**ITSC FY01 Priority:** 4 - Low**Justification****ITA:** ☐ **RPMS Growth Plan:** ☐**ISAC Goals:** 13 Administrative Enviroment **Legislative Drivers:**

The Web Team has had many requests for this service from IHS Areas, Offices, and Tribal groups.

**Task Description**

1. Purchase Peopleware services on contract.
2. Develop preliminary registration pages for CSC sponsored meetings Oct. 2000 - Jan. 2001.
3. Set up one "seat" of the Peopleware meeting management client software package for testing.
4. Develop seamless mechanism for linking to Peopleware web site from IHS pages.
5. Insure Peopleware database download does not compromise IHS WAN security.

**Web FY01 Ad Hoc Application and Site Enhancements**# **A-081****Project Category:** Applications Web-Related**FY01 Project Type:** Operations & Maintenance**Contact:** Thurman, Len

This project reflects the continuous support provided website clients by the Web Team. This support consists primarily of ad hoc requests for enhancement of existing Web applications.

**Current Status: Ongoing (O&M % Complete:** 67%**Actual Begin Date:** 02-Oct-00 **Estimated Duration:** 12 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
2	Jr Web Developer	25.00%	12	912 Hours
2	Sr Web Developer	25.00%	12	912 Hours
<b>Totals: 4 Staff</b>				<b>1,824 Hours</b>

**ITSC FY01 Priority:** 3 - Medium**Justification****ITA:** ☐ **RPMS Growth Plan:** ☐**ISAC Goals:** 04 Technical Support**Legislative Drivers:**

The Web Team is committed to client support and considers requests to be a high priority for which ongoing development activities are interrupted.

**Task Description**

Tasks in this project are based on client requests and are thus difficult to define. They generally consist of requests for help with website design, resolution of difficulties in attempts to use new languages or techniques, resolution of linking or connectivity issues, etc.

**Web Infrastructure Design & Implementation**

# I-027

**Project Category:** Infrastructure Web-Related**FY01 Project Type:** Enhancement**Contact:** Robar, Jo

The IHS web infrastructure is an application programming interface (API) to the IHS web that allows web developers to use pre-packaged utilities independent of development language. The infrastructure components allow the developer to address the task at hand while reducing the development time by eliminating development of support components like security and logins that most web sites require.

**Current Status:** In Progress      **% Complete:** 60%**Actual Begin Date:** 02-Oct-00      **Estimated Duration:** 6 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
1	Jr Programmer	100.00%	6	912 Hours
1	Sr Programmer	100.00%	6	912 Hours
1	Project Lead	10.00%	6	91 Hours
<b>Totals: 3 Staff</b>				<b>1,915 Hours</b>

**ITSC FY01 Priority:** 1 - Required**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 04 Technical Support  
98 Legislated**Legislative Drivers:** Comp Sec Act  
GPEA  
PDD-63

This project is required because all Web applications depend on this API infrastructure.

**Task Description**

Completion of the web infrastructure shell. Components to be completed include E3R error system, site administration, events calendar/personal scheduler, help system, marquee, links and documents, tables, reports to, skill set, user preferences, mailing lists/subscriptions, and reference information.

**Web Useability Evaluation and Redesign**

**# A-107**

***Project Category:*** Applications Web-Related

***FY01 Project Type:*** New

***Contact:*** Thurman, Len

TBD

**Current Status: In Progress**      **% Complete:**      20%

**Actual Begin Date:** 01-Feb-01      **Estimated Duration:**      5 Months

**Staffed By:**      Both

**Estimated InHouse FY01 Staffing Requirements**

**ITSC FY01 Priority:**    2 - High

**Justification**

**ITA:** ☐    **RPMS Growth Plan:** ☐

**ISAC Goals:** 13    Administrative Enviroment      **Legislative Drivers:**

**Web-based IHS Work Order System**

# A-078

**Project Category:** Applications Financial & Admin**FY01 Project Type:** Continuation**Contact:** Kroska, Mark

This project proposes to continue development of an Information Technology Work Order System for use by the IHS nationwide as well as Tribes and Urban programs. This is a senior management initiative that relates specifically to requests received from I/T/Us. Similar projects will be coordinated so that, if possible, one comprehensive solution will be developed. (See #I-033 NPIRS Tracker Enhancement and #O-015 Project Management Application Harmonization.)

**Current Status:** On Hold      **% Complete:** 55%

5/11/01: On hold due to other priorities.

**Actual Begin Date:** 03-Apr-00      **Estimated Duration:** 6 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
1	Sr Programmer	100.00%	3	456 Hours
<b>Totals: 1 Staff</b>				<b>456 Hours</b>

**ITSC FY01 Priority:** 3 - Medium**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 13 Administrative Environment      **Legislative Drivers:**

There is a growing demand, legislative driven, for greater project management and oversight in government agencies. This effort at the IHS is an attempt to consolidate into one system the tools required to manage and monitor project status with the existing tools, or those under current development, used to record and track problem calls on the RPMS packages (NOIS) and the Work Order system. It is an attempt to develop a single efficient way to manage activities and the resources required for them, from the single RPMS problem call to the multi-layered project.

**Task Description**

1. Create universal facility and personnel table that will be used for all categories of work orders.
2. Complete the remaining categories, PC/LAN, web, NOIS for RPMS calls, etc.
3. Convert current NOIS (RPMS) work orders to this system.
4. Enhance security, such as HTML execution of entered text.
5. Convert to Infrastructure Subsystem.



Lead Department:

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**CSMT**

**Computer Systems  
Management Team**

**Cache' conversion from MSM: Project Plan and Pilot Site**# **I-006****Project Category:** Infrastructure General**FY01 Project Type:** New**Contact:** Pullen, Rick

The purpose of this project is to identify and plan a conversion of IHS RPMS sites from Intersystems "M" to Cache'. This is required to maintain the RPMS growth path since MSM is not supported for Windows 2000 servers. Additionally, the Cache software provides an object oriented programming approach, GUI interfaces, and convergence with the Department of Veterans Affairs software development path. Specific areas of effort include developing an Architecture Design Document; defining and documenting a process for converting the RPMS database; examining the ability to have a smaller, more manageable active database; and defining and documenting a process for converting an RPMS database from an MSM environment to that of Cache'. The Cache' environment is expected to operate in such a manner as to emulate how RPMS currently operates in an MSM environment.

**Current Status: In Progress**      **% Complete:** 42%**Actual Begin Date:** 01-Aug-00      **Estimated Duration:** 14 Months**Staffed By:** Both**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
2	Sr Management Anal	40.00%	12	1,459 Hours
2	Sr Network Specialist	15.00%	12	547 Hours
1	Jr Programmer	25.00%	12	456 Hours
2	Sr Programmer	25.00%	12	912 Hours
1	Project Lead	100.00%	12	1,824 Hours
3	Jr Systems Analyst	25.00%	12	1,368 Hours
2	Sr Technical Writer	10.00%	12	365 Hours
2	Verifier	10.00%	12	365 Hours
<b>Totals: 15 Staff</b>				<b>7,296 Hours</b>

**Other Direct Costs (ODCs) Estimate**

ODC Category	Description	Total Cost
Contractor Services	Implementations Teams	\$240,000
Contractor Services	EDS -- PM, Coordination and Communications for overall project	\$325,000
<b>Total:</b>		<b>\$565,000</b>

**ITSC FY01 Priority:** 2 - High**Justification****ITA:** ☒      **RPMS Growth Plan:** ☒**ISAC Goals:** 02 Interoperability**Legislative Drivers:**

Since the face of technology is changing, Cache is the M solution we must eventually migrate to.



Some RPMS customers are wanting to explore Cache. Some are perhaps even now using it. A follow-on project is also recommended for researching how to exploit the benefits of Cache's integration of capabilities: web, objects and SQL.

**Task Description**

1. Identify operating procedures and systems to use during the port. These include:
  - Target hardware
  - Target host operating systems
  - Source file, notes and documentation archival repositories

All documents, notes and routines (procured or developed in-house) will be maintained in an archival directory.

2. Identify syntax specific to MSM that is not supported by Cache and search the target database for the specified strings. The findings will be analyzed to determine the proper course of action to bring about similar functionality in the Cache environment. The required code changes will not be made until the target database is moved to the Cache system. Any changes cannot be tested in the affected routines until the routines are in the Cache environment. Search strings and any routines created or used will be included in the formal documentation.

3. Install and configure the Cache environment(s) on the host operating system(s). Special routines, such as startup for Taskman and user log in to Kernel will be developed. The final system configuration and developed routines will be formally documented.

4. Migrate the target database to the Cache environment. Recordings will be made on the procedures used so formal documentation can be created.

5. Make the modifications required from searching for MSM specific syntax. Modifications made will be documented in detail.

6. Formally document the conversion process to create install procedures and technical and user manuals.

**Cloverleaf Integration Engine Deployment**

# I-001

**Project Category:** Infrastructure General**FY01 Project Type:** New**Contact:** Gonzales, Arthur

This project and its scope, staffing requirements, and even tasks depends upon the findings and results of the Cloverleaf Engine Pilot project #I-002. Once the pilot proves successful, the Cloverleaf Engine model will be made available to the I/T/Us. The extent of the deployment effort depends on what I/T/Us decide to implement the model and how much support each implementing I/T/U requires. The estimated labor requirements below clearly cannot represent accurately what the actual requirements will be without knowing how many interfaces will need to be developed, how many sites will decide to implement the model, and the amount of technical support those sites will need from ITSC to complete the implementation.

**Current Status:** Not Started      **% Complete:** 0%**Actual Begin Date:**      **Estimated Duration:** 6 Months**Staffed By:** Outsourced**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
1	Jr Network Specialist	10.00%	6	91 Hours
1	Sr Programmer	10.00%	6	91 Hours
1	Project Lead	10.00%	6	91 Hours
<b>Totals: 3 Staff</b>				<b>274 Hours</b>

**ITSC FY01 Priority:** 4 - Low**Justification****ITA:** ☒      **RPMS Growth Plan:** ☐**ISAC Goals:** 02 Interoperability**Legislative Drivers:**

The cost of maintaining many interfaces requires significant hardware (e.g., ports for interfacing) and staffing resources. The more sites that elect to adopt this Cloverleaf Integration Engine model, the lower these costs will be.

**Task Description**

Specific tasks for this deployment depend upon the sites electing to implement this model, the number of interfaces needing to be developed, and the type and extent of technical support required by those implementing sites. Those sites requiring full support will be provided with interface programming, system installation and configuration, message monitoring, and networking assistance.

**Cloverleaf Integration Engine Pilot**# **I-002****Project Category:** Infrastructure General**FY01 Project Type:** Continuation**Contact:** McCain, Jim

This project will demonstrate the usefulness and utilization of a commercial integration engine called Cloverleaf. This integration engine monitors ports from other systems through which those systems exchange messages. It acts as a router, receiving, storing, and forwarding messages when the target systems can receive them. It also translates messages from one format to another according to mapped formats, requiring applications to use only one format for messaging and letting the engine do the reformatting based on its mapping. It will be housed at the ITSC. The pilot utilization will be determined, possibly working with ENVOY service transactions and the 3M system that gathers information (diagnosis, visits, length of stays) from RPMS and determines appropriate billing codes.

**Current Status:** In Progress      **% Complete:** 50%**Actual Begin Date:** 04-Dec-00      **Estimated Duration:** 3 Months**Staffed By:** Outsourced**Estimated InHouse FY01 Staffing Requirements**

#	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
1	Jr Network Specialist	10.00%	3	46 Hours
1	Sr Programmer	25.00%	3	114 Hours
1	Project Lead	10.00%	3	46 Hours
1	Jr Technical Writer	10.00%	3	46 Hours
1	Verifier	10.00%	3	46 Hours
<b>Totals: 5 Staff</b>				<b>296 Hours</b>

**Other Direct Costs (ODCs) Estimate**

<u>ODC Category</u>	<u>Description</u>	<u>Total Cost</u>
Contractor Services	Mitretek	\$93,750
<b>Total:</b>		<b>\$93,750</b>

**ITSC FY01 Priority:** 2 - High**Justification****ITA:** ☒      **RPMS Growth Plan:** ☐**ISAC Goals:** 02 Interoperability**Legislative Drivers:**

The cost of maintaining many interfaces requires significant hardware (e.g., ports for interfacing) and staffing resources, and this project will reduce those costs.

**Task Description**

1. Evaluate and select commercial interface engine.
2. Purchase and install hardware and software at ITSC.
3. Determine the pilot project scope and sites/projects.
4. Develop interface engine strategy.

5. Determine interface engine architecture.
6. Build the interfaces.
7. Testing the interfaces internally.
8. Evaluate the pilot and determine Go/NoGo decision on implementation.
9. Publicize the Cloverleaf Integration Engine model with the pilot results and promote its acceptance by I/T/U sites.
10. Develop a plan for interapplication communication using GIS, HL7, and the Cloverleaf Integration Engine.

**GCPR Pilot Environment Setup and Maintenance**

# R-001

**Project Category:** Research & Development GCPR-Related**FY01 Project Type:** Continuation**Contact:** Huggins, George**Sponsor:** GCPR

This effort will establish and maintain the necessary environment for an effective GCPR pilot. This includes the server setup in Albuquerque, telecommunications, and the set up of a demonstration database.

**Current Status:** Completed      **% Complete:** 100%**Actual Begin Date:** 21-Aug-00      **Estimated Duration:** 6 Months      **Date Complete** 29-Dec-00**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
2	Sr Network Specialist	10.00%	6	182 Hours
1	Sr Programmer	25.00%	6	228 Hours
1	Project Lead	25.00%	6	228 Hours
<b>Totals: 4 Staff</b>				<b>638 Hours</b>

**ITSC FY01 Priority:** 2 - High**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 02 Interoperability  
12 CPR  
15 Partnerships**Legislative Drivers:**

This environment setup and maintenance is required for a successful pilot of the GCPR.

**Task Description**

1. Evaluate and determine the telecommunications needs of the pilot environment.
2. Evaluate and determine the hardware/software needs.
3. Set up and configure the pilot environment.
4. Design and populate a demonstration database.
5. Test the new environment and maintain it.

**Generic Interface System (GIS) IHS Deployment**# **I-009****Project Category:** Infrastructure General**FY01 Project Type:** New**Contact:** McCain, Jim

RPMS will use a message generating system, the Generic Interface System (GIS), to generate HL7 messages. GIS will replace the current HL and BHL packages. The purpose of the GIS is to provide data interchange via HL7 not only between the GCPR Framework and RPMS, but also for ongoing data exchange for IHS sites' internal application needs, such as pharmacy (Viking), lab instrument interfaces (Data Innovations), Third Party Billing (3M), special interfaces to outside entities, e.g. the Center for Disease Control (CDC), etc.

**Current Status:** Not Started      **% Complete:** 0%**Actual Begin Date:**      **Estimated Duration:** 9 Months**Staffed By:** Both**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
2	Contractor Support	30.00%	9	821 Hours
1	Project Lead	10.00%	9	137 Hours
<b>Totals: 3 Staff</b>				<b>958 Hours</b>

**ITSC FY01 Priority:** 2 - High**Justification****ITA:** ☒      **RPMS Growth Plan:** ☒**ISAC Goals:** 02 Interoperability**Legislative Drivers:**

Adaptation of the GIS into RPMS communication is a prerequisite to full adoption of the GCPR Framework. Promoting use of standards-based messaging and interface engines will provide IHS with many benefits. Among these are reducing the cost of interfacing, which without an enterprise strategy can be a major and often unanticipated capital investment. Standardized messaging assists in reducing the number of customized interfaces between local applications, corporate level systems, and communication with systems operated by external partners.

**Task Description**

1. Marshal GIS through testing, certification, release, and deployment.
2. Provide programming maintenance, support, and implementation of the GIS.
3. Develop a plan for interapplication communication using GIS, HL7, and the Cloverleaf Integration Engine.

**Comments**

Startup of this project depends upon successful completion of verification and validation for the GIS pilot in Project #R-004.

**Kernel 8 Security Options Part 3 Implementation**

# I-030

**Project Category:** Infrastructure Security**FY01 Project Type:** Enhancement**Contact:** Huggins, George

As one approach to increase the security of the RPMS software platform, IHS can will implement Part 3 of VA Kernel 8 security options. It is a subset of # I-014 VA Infrastructure Patch and will have major impact on field staff.

**Current Status:** Not Started      **% Complete:** 0%**Actual Begin Date:**      **Estimated Duration:** 6 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
1	Sr Systems Analyst	30.00%	6	274 Hours
<b>Totals: 1 Staff</b>				<b>274 Hours</b>

**ITSC FY01 Priority:** 2 - High**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 04 Technical Support  
98 Legislated**Legislative Drivers:** HIPAA

This effort will increase security of the RPMS software platform.

**Task Description**

1. Review VA Kernel Part 3 and determine impact on IHS version of Kernel.
2. Program changes needed.
3. Test and verify.
4. Implement at test sites.
5. Implement nationwide.

**Seat Management Evaluation and Recommendation for Sites**# **I-053****Project Category:** Infrastructure General**FY01 Project Type:** New**Contact:** Federico, Cathy

This project involves evaluation of the Seat Management contracts available via DHHS and other sources (GSA, ODIN, etc.) to determine benefits and cost-savings available via centralized, outsourced purchases and support of common desktop software.

**Current Status:** Not Started      **% Complete:** 0%**Actual Begin Date:**      **Estimated Duration:** 4 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
1	Project Lead	20.00%	4	122 Hours
<b>Totals: 1 Staff</b>				<b>122 Hours</b>

**ITSC FY01 Priority:** 3 - Medium**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:****Legislative Drivers:**

This effort will determine if cost-savings are available through centralized purchases of common software.

**Task Description**

1. Evaluate DHHS seat management contract.
2. Evaluate other options for seat management and the volume purchase of common software.
3. Prepare report of evaluation with results and recommendations for management.



**Verification Gold Version UCIs**

# A-015

**Project Category:** Applications General**FY01 Project Type:** New**Contact:** Pike, Michael

This project effort will create a separate environment of RPMS gold version packages with data and another separate environment for VA gold version packages. These environments would include all applications that have been certified, released, and in use in the field. Access would be restricted and monitored and the environments maintained to current level of all packages at all times.

**Current Status:** Not Started      **% Complete:** 0%**Actual Begin Date:**      **Estimated Duration:** 6 Months**Staffed By:****Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
1	Sr Systems Analyst	50.00%	6	456 Hours
<b>Totals: 1 Staff</b>				<b>456 Hours</b>

**ITSC FY01 Priority:** 2 - High**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 04 Technical Support  
13 Administrative Environment  
98 Legislated**Legislative Drivers:** HIPAA

This separate environment with the complete suite of current RPMS packages and patches would be used by newly hired professional staff in learning the packages they require and for display purposes with visiting groups. It will be particularly important to developers working on interfaces among the packages.

**Task Description**

1. Set up a new and separate UCI in the development environment with appropriate security and access levels.
2. Install every package and its patches to bring them to the current release level.

**Windows 2000 Migration**# **I-012****Project Category:** Infrastructure General**FY01 Project Type:** Continuation**Contact:** Pullen, Rick

This project involves migration of the IHS desktop environment to Windows 2000. This upgrade is necessary to improve the IHS infrastructure. This project is anticipated to be 24-months in duration.

**Current Status:** In Progress      **% Complete:** 10%**Actual Begin Date:** 02-Oct-00      **Estimated Duration:** 12 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
7	Sr LAN Specialist	30.00%	12	3,830 Hours
1	Project Lead	30.00%	12	547 Hours
<b>Totals: 8 Staff</b>				<b>4,378 Hours</b>

**ITSC FY01 Priority:** 3 - Medium**Justification****ITA:** ☒      **RPMS Growth Plan:** ☐**ISAC Goals:** 04 Technical Support  
14 Staff Equipment**Legislative Drivers:**

This migration will provide the Agency with a more robust and secure operating system.

**Task Description**

1. Implement WIN 2000 DNS solution.
2. Evaluate WIN 2000 implementation ramifications for all IHS.
3. Train administrators.
4. Implement WIN 2000, Exchange 2000, etc., on ITSC Servers, TEST.
5. Implement IHS Wids.

Lead Department:

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**HQ**

**DIR Headquarters**

## IHS FY02 Information Technology Architecture (ITA)

# O-004

**Project Category:** Other**FY01 Project Type:** Operations &  
Maintenance**Contact:** McCain, Jim

The IHS Information Technology Architecture (ITA) document is an integrated framework of principles, guidelines, and rules for evolving and maintaining existing IT and acquiring new IT to achieve strategic and information resource management goals. The ITA is intended to be a dynamic document that will be updated on a continuous basis with new versions released annually, or as changes in the organization and/or technology dictate. This document is not meant to stand-alone; it stands side-by-side with the organization's business plans, Information Technology (IT) strategic plans, and specific implementation plans. Several sections of the FY02 ITA need to be expanded, including Business Process and Security Architecture.

**Current Status:** In Progress      **% Complete:** 40%**Actual Begin Date:** 01-Feb-01      **Estimated Duration:** 6 Months**Staffed By:** Both**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
1	Project Lead	20.00%	6	182 Hours
1	Sr Technical Writer	50.00%	1	76 Hours
<b>Totals: 2 Staff</b>				<b>258 Hours</b>

**Other Direct Costs (ODCs) Estimate**

ODC Category	Description	Total Cost
Contractor Services	EDS	\$90,000
<b>Total:</b>		<b>\$90,000</b>

**ITSC FY01 Priority:** 1 - Required**Justification****ITA:** ☒      **RPMS Growth Plan:** ☐**ISAC Goals:** 03 Annual Plan  
98 Legislated**Legislative Drivers:** Clinger Cohen Act

The IHS ITA meets the requirements of the Clinger-Cohen Act (CCA) and HHS.

**Task Description**

1. Identify specific areas that need substantial input.
2. Assign research and writing assignments.
3. Develop and implement a communication plan.
4. Plan and implement a review process with the ITA Workgroup.
5. Incorporate all changes into a final FY02 version for ISAC and CIO review and approval.

As of 3/23/01, the work to be completed by this Review Board and contractors includes the following:

- 1) Review and possibly revise our Business Needs and Drivers
- 2) Review and possibly revise our Standards Profile
- 3) Review and possibly revise the Technologies called for by the ITA
- 4) Development and documentation of our Reference Security Architecture
- 5) Harmonization with VHA 2001 Enterprise Architecture
- 6) Harmonization with HHS Enterprise Architecture
- 7) Update the current environment section
- 8) Assess progress made towards, review and possibly revise our Target Architecture
- 9) Develop and implement a ITA Communication Plan

**Background**

The ITA focuses on four objectives: 1) to institute an adaptive architecture that aligns with and enables IHS business requirements; 2) provide a blueprint to guide the Chief Information Office in planned and future work efforts; 3) meet the requirements of the Clinger-Cohen Act of 1996 and related expectations of the Office of Management and Budget (OMB); and 4) be consistent with the Veterans Administration's (VA) ITA and Health and Human Services (HHS) ITA. To this end, this ITA has adopted ideas and concepts from both ITAs as well as from the Healthcare Finance Administration (HCFA) ITA.

Specifically, the ITA document:

- Presents a high-level architectural vision of a future ITA for IHS
- Identifies tactical initiatives for strategic investment that support the architectural vision
- Establishes a reference architecture model for IHS
- Aggregates and establishes a set of broadly applicable technical and security standards
- Presents a set of architectural models that depict the technical, operational, data and systems environments
- Provides guidance and recommendations for future development efforts to ensure their consistency with the architecture

**Public Key Infrastructure (PKI) Pilot and Evaluation**# **I-005****Project Category:** Infrastructure Security**FY01 Project Type:** New**Contact:** Aiken, Dan**Sponsor:** GCPR

This project will procure and implement a pilot installation of a Public Key Infrastructure (PKI) for evaluation purposes. PK technology permits the secure exchange of electronic information and the entry into business transactions with confidence that the exchange partner is who they claim to be, and that the information exchanged remains private and has not been tampered with. It also ensures that neither party can repudiate the transaction. For IHS, use of PK technology will provide authentication and non-repudiation of requests for information, as well as a means by which the integrity of the transmitted information can be determined.

IHS has several potential uses of a PKI. The most near-term driver is the Government Computerized Patient Record (GCPR) Framework Project. The currently proposed GCPR approach requires users to have certificates to authenticate themselves to the GCPR framework and to use Public Key (PK) technology for authentication, signing (non-repudiation), and confidentiality protections. Use of this technology will permit sharing of confidential data in a secure manner. This same technology can be applied to other IHS applications and services that may benefit from such protections. For example, many IHS organizations are using Web servers and mail clients that could readily be enabled to use PK technology and certificates. In addition to secure Web, IHS could use secure e-mail to communicate sensitive information.

**Current Status:** In Progress      **% Complete:** 20%**Actual Begin Date:** 02-Oct-00      **Estimated Duration:** 6 Months**Staffed By:** Both**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
1	Jr Network Specialist	25.00%	4	152 Hours
1	Sr Network Specialist	10.00%	5	76 Hours
1	Project Lead	15.00%	6	137 Hours
1	Sr Systems Analyst	15.00%	6	137 Hours
<b>Totals: 4 Staff</b>				<b>502 Hours</b>

**Other Direct Costs (ODCs) Estimate**

ODC Category	Description	Total Cost
Contractor Services	Mitretek	\$162,500
<b>Total:</b>		<b>\$162,500</b>

**ITSC FY01 Priority:** 1 - Required**Justification****ITA:** ☐      **RPMS Growth Plan:** ☒

**ISAC Goals:** 02 Interoperability  
98 Legislated

**Legislative Drivers:** Comp Sec Act  
GPEA  
HIPAA

Implementing a PKI is one of the technical security steps necessary in order for IHS to comply with to HIPAA, GPEA, and Computer Security Act requirements. Federal agencies are required to establish controls to assure adequate security for all information processed, transmitted, or stored in Federal information systems. This includes assuring that systems and applications used by the agency operate effectively and provide appropriate confidentiality, integrity, and availability, through the use of cost-effective management and personnel, and operational and technical controls to protect data resident on Federal automated information systems. PK technology has the potential to provide a secure, paperless environment. PK techniques can replace handwritten, wet signatures and digital facsimiles of handwritten signatures. PK techniques, along with a supporting infrastructure, allow secure communication between parties without any prior agreement or arrangement, while providing for authentication, integrity, and non-repudiation of the communication.

**Task Description**

1. IHS will review the recommended PKI strategy including:
  - Estimation of the number of certificates required;
  - Decision on the registration approach;
  - Decision on outsourcing versus running an internal CA; and
  - General requirements.
2. Mitretek will write a Certificate Policy.
3. IHS will review the Certificate Policy.
4. Mitretek will write a Certification Practices Statement.
5. IHS will review the Certification Practices Statement.
6. Mitretek will develop a preliminary implementation plan based on the decisions in step 1. The plan will include:
  - Cost estimates (including contacting CA service providers) for cost estimates and comments on the approach
  - Continued exploration of joint IHS/VA CA options
  - Issues related to standard technical architecture and tokens
7. Mitretek will identify and select prototype applications (e.g. S/MIME, secure Web, telnet over SSL). The goal is to use representative technologies in a typical configuration and environment.
8. Mitretek will implement/evaluate the prototype with a sufficient number of typical users and an internal CA). Teams will travel to sites for the purpose of training both RA and subscriber personnel.
  - The purposes of implementing the prototype are:
  - To evaluate the ease of use for the end-user
  - To determine the operational issues involved in maintaining the various interfaces and databases
  - To determine the operational burden of registering users, revoking certificates, renewing certificates, and performing key recovery
  - To implement the prototype in such a way that all the steps described in this paper including registration, renewal, revocation, and PK-enabling of an application are exercised

9. Mitretek will make an implementation recommendation. The lessons learned from the prototype implementation can be applied to a full-scale PKI implementation and will permit modification of plans to be made based on experience.

10. IHS will make an implementation decision.

11. Mitretek will prepare a statement of work including requirements.

12. Mitretek will evaluate proposals, provide technical assistance, and test/evaluate the implementation. (TBD pending basic approval and statement of work)

### **Background**

Federal agencies, State Medicaid agencies, private health plans, health care providers, and health care clearinghouses must assure their customers (such as patients, insured, providers, and health care plans) that the confidentiality and privacy of health care information they electronically collect, maintain, use, or transmit is maintained. Security of health information is especially important when health information can be directly linked to an individual. Confidentiality is threatened not only by the risk of improper access to electronically stored information, but also by the risk of interception during electronic transmission of the information.

To be of use, healthcare information must be available when and where it is needed. The practitioner must also be assured that the information is correct, that it has not been altered in unauthorized ways, and that it represents the data for the patient under treatment. The Indian Health Service's (IHS) most sensitive data is patient medical records. Protecting the confidentiality of this data and other data is essential to maintaining the confidence and trust of the community IHS serves. At the same time, the quality of care provided to its customers depends on having accurate data available when and where it is needed.

Encryption and signature are the two basic functions provided by PK technology. But these two basic functions support four security services: authentication, confidentiality, integrity, and non-repudiation. Encryption supports confidentiality, while digital signature provides the basis for the remaining three services. Assuming the private key owner controls the private key and ensures its secrecy, verification of a signed message using the public key contained in the certificate authenticates that the message was sent by the private key owner.

A Certificate Authority (CA) is an entity that is responsible for authorizing and causing the issuance of a certificate, which are used PK encryption technology. This technology can be used to encrypt information, digitally sign information to ensure its integrity and source, and to identify and authenticate users. A certificate is a digitally signed data structure that binds a individual's name with a public key. The individual has control of the private key associated with the public key. Agencies will issue electronic certificate authorities (CAs) to their users, containing the user's private confidentiality key and their private digital signature key.

An evaluation of PKI technology and approaches has been prepared for IHS. The recommendations are as follows:

- IHS should buy PKI services. Analysis of whether to use the VA to supply CA services should be continued.
- IHS should establish a registration infrastructure oriented to Service Units and following the model currently used for IHS ID cards and facility badges
- IHS should use separate keys for signature and encryption



- The e-mail attribute should not be used unless required to support existing or planned e-mail clients
- IHS should obtain services to provide identity certificates and server certificates with the capability to expand to include e-mail, IPSEC, and code signing certificates, as IHS requires them
- Initially, IHS should plan to use floppy disks as tokens until an investigation can be completed as to the maturity and interoperability of hardware tokens
- The IHS PKI should comply with the Federal PKI (FPKI) Class 3 criteria to ensure interoperability with other PKIs serving other Government agencies



Lead Department:

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IHS Area

IHS Area Office

**VistAion Technology Transfer Prototype**# **I-078****Project Category:** Infrastructure General**FY01 Project Type:** Continuation**Contact:** Danielson, Mike

The VistAion prototype is the next step after successful evaluation of the product (#R-020). VistAion is a multi-tiered, component based clinical desktop application that supports a wide range of clinical functions using standardized, plug-in objects. With computer coding written specifically for the Veteran's Administration, it is possible to modify and link this code to the Resource Patient Management System (RPMS) using server-side VistA components. This linkage will allow the RPMS to have a graphics user interface (GUI) that will perform patient lookup, clinical encounter documentation, on-line ordering, results retrieval, decision support, problem list management, consult tracking and adverse reaction tracking. Once this technology is combined with other software tools, several component based objects will act as a cohesive application, allowing the sum of the components to operate and appear to be an individualized application, configured for the end user's needs. The prototype is expected to be presented at the IHS 2001 Tech Conference.

**Current Status:** In Progress      **% Complete:** 20%**Actual Begin Date:** 11-Apr-01      **Estimated Duration:** 4 Months**Staffed By:** Both**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
1	Jr Programmer	20.00%	4	122 Hours
1	Project Lead	5.00%	4	30 Hours
1	Jr Technical Writer	40.00%	1	61 Hours
1	Verifier	40.00%	2	122 Hours
<b>Totals: 4 Staff</b>				<b>334 Hours</b>

**Other Direct Costs (ODCs) Estimate**

ODC Category	Description	Total Cost
Contractor Services	Doug Martin, CSI	\$135,000
Other	Travel & Per Diem	\$15,000
<b>Total:</b>		<b>\$150,000</b>

**ITSC FY01 Priority:** 2 - High**Justification****ITA:** ☒      **RPMS Growth Plan:** ☒

**ISAC Goals:** 02 Interoperability  
 07 GUI  
 12 CPR

**Legislative Drivers:**

The RPMS has been in operation for approximately sixteen years, with additional modules added as needed. During this period, no major technologies have been applied to the operating system, database management, or executable code that would improve speed and efficiency of processing. In addition, the "roll and scroll" based screen has made interaction between the end user and the

application difficult to learn and to operate. Because of the growing obsolescence of the RPMS, the clinical and administrative efficiencies and ease of use are being rapidly degraded as new technology provides other health care environments with state of the art processing, storage and retrieval capabilities. As the IHS falls farther behind in its ability to process information and to share with other health care providers, it becomes imperative that the new technology (VistAion) be applied to the RPMS in order to bring the system up to date.

**Task Description**

1. Provider Order entry - Includes lab tests, medications, procedures, allergies, radiology and consults.
2. Clinical Decision Support - Includes order checking, PCE reminders, VIPER (CIRN) CDSS
3. Note Authoring - Includes progress notes, discharge summaries, consultation notes.
4. Consult Tracking, Encounter Data Capture, and Notifications/Alerts

**Comments**

This project is funded by ITSC via the Billings Area.



Lead Department:

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ITSC  
Information  
Technology Support  
Center

**Data Management Workgroup**# **O-032*****Project Category:*** Infrastructure General***FY01 Project Type:*** New***Contact:*** Huggins, George

The Data Management Committee (DMC) has been proposed as a cooperative committee among programs of the Office of Public Health (OPH) and the Office of Management Support (OMS). The DMC is intended to provide direction for and harmonization of, and focus on, projects and activities contributing efforts of importance to meeting and improving the data needs of the I/T/Us. The DMC will facilitate coordination of projects whose scope exceeds that of local or particular programs of offices within the OMS or OPH. Those projects could include, but not be limited to, activities that operate on or for data, e.g., collection, storage, computation, transportation, and warehousing of data.

**Current Status: On Hold**                      **% Complete:**      10%

5/15/01: On hold due to DQAT priorities.

**Actual Begin Date:** 15-Dec-00              **Estimated Duration:**      9 Months**Staffed By:**      In House**Estimated InHouse FY01 Staffing Requirements****ITSC FY01 Priority:****Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 11      Data Quality**Legislative Drivers:****Background**

There is an increasing need for quality data to be delivered from local I/T/U information systems to a wide variety of external and internal clients. More programs and offices within the IHS are becoming interested and involved in the data that is collected, stored, computed, transported, and warehoused in Indian Country. That data is often required to be made available, or transported, to external clients, for purposes that will benefit I/T/U clients, e.g., claims submissions for revenue recovery; epidemiological studies for public health organizations. Additionally, legislative imperatives, e.g. GPRA and HIPAA, strongly suggest a multi-disciplinary approach to data management activities.



**Data Quality Action Team (DQAT)**# **O-025****Project Category:** Other**FY01 Project Type:** New**Contact:** Griffith, Stan

This action team is charged with addressing issues surrounding data quality. The short-term goals of the DQA Team are to ensure access to the DB2 production database; to begin implementing a true data warehouse/data mart design; to improve NPIRS documentation; to complete an inventory of all NPIRS data; and to implement a process for producing iteratively improved user population reports, and to do this using an open process that promotes full communication. The Team will coordinate these activities with related ongoing ITU data-related initiatives.

**Current Status:** In Progress      **% Complete:** 4%**Actual Begin Date:** 15-Mar-01      **Estimated Duration:** 6.5 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements****ITSC FY01 Priority:** 2 - High**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 11      Data Quality**Legislative Drivers:**

**Diabetes Data Projects**

# O-027

**Project Category:** Other**FY01 Project Type:** Continuation**Contact:** Griffith, Stan

This project effort will determine a logic using data in the RPMS that will produce an understandable, reproducible, and useful denominator list of patients that can then be used by the diabetes audit to produce measures that can be validly compared across sites. Project staff will look at the Diabetic population who receive their primary care at identified facilities to determine a logic and gold standard denominator that can be applied to other programs and their data. One project intent is to publish aggregated data from this internal analysis and its conclusions in a manner in which the data are statistically anonymous by individual and in which neither Tribes, facilities, nor the Areas in which they reside are identified.

**Current Status: In Progress**      **% Complete:** 25%**Actual Begin Date:** 02-Oct-00      **Estimated Duration:** 12 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
1	Sr Management Anal	25.00%	12	456 Hours
1	Project Lead	25.00%	12	456 Hours
<b>Totals: 2 Staff</b>				<b>912 Hours</b>

**ITSC FY01 Priority:** 1 - Required**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 09 Decision Support**Legislative Drivers:** Leg

Results from this project with the Diabetes data can be applicable to other program data as a proven, refined research method and statistical approach.

**Task Description**

The Project Lead provides consultation services during the startup of this project, sets up contracts as necessary, provides oversight for the ITSC contribution to the project, and works with other programs interested in adopting the logic and research method developed with the Diabetes data. The Sr. Management Analyst provides the statistical and analytical support to the project.

**Evaluation of Clinical Impact of RPMS**

# O-022

**Project Category:** Other**FY01 Project Type:** New**Contact:** Cullen, Theresa

Submitted as grant request. The project proposes to evaluate the effectiveness and outcome of new software applications within the RPMS system. This current proposal will evaluate three areas of IHS's current health care IT system. Applications to be evaluated include 1) Lab package, including baselining before and evaluation of sites after Lab deployment; 2) Health Summary, assessing the impact of changing where the prevention prompts occur; and 3) Use of Health Summary.

**Current Status:** Not Started      **% Complete:** 1%**Actual Begin Date:** 01-Mar-01      **Estimated Duration:** 8 Months**Staffed By:** Both**Estimated InHouse FY01 Staffing Requirements**

#	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
1	Project Lead	10.00%	9	137 Hours
1	Subject Matter Exper	10.00%	9	137 Hours
1	Sr Systems Analyst	10.00%	9	137 Hours
1	Sr Technical Writer	20.00%	3	91 Hours
<b>Totals: 4 Staff</b>				<b>502 Hours</b>

**Other Direct Costs (ODCs) Estimate**

<u>ODC Category</u>	<u>Description</u>	<u>Total Cost</u>
Contractor Services		\$45,000
<b>Total:</b>		<b>\$45,000</b>

**ITSC FY01 Priority:** 3 - Medium**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 09 Decision Support  
12 CPR**Legislative Drivers:****Task Description**

RPMS Lab Package

- a) identification of typical sites within the I/T/U setting who are not currently utilizing the lab package (already verbally identified);
- b) development of an evaluation tool that will focus on timeliness, impact on care, cost savings, education from the lab package;
- c) pre and post evaluation of three sites that undergo lab package deployment ( one hospital and two ambulatory care sites);
- d) education of providers, as well as consumers, during this process;
- e) evaluation will also include consumer evaluation;
- f) if enough resources, may also evaluate comparable sites that have had the package implemented for over 24 months.

2. Evaluate Prevention Prompts in Health Summary

- a) evaluate compliance with prevention reminders as they currently exist at three sites that are routinely using health summaries ( one hospital/ two ambulatory clinics) by chart reviews—both electronically and by hand
- b) change the health summary component to have the reminders occur at the beginning of the summary
- c) repeat step a
- d) educate providers and patients about the need for prevention compliance (through presentations and through written material, hopefully presented to providers electronically)

3. Evaluate Use of Health Summary

- a) evaluate the current health summary by PARTITION ( e.g. meds, allergies, etc) through structured interviews of the users of the health summary
- b) perform this evaluation at three sites ( at a minimum)
- c) provide education to providers and patients on the role of the health summary, as well as where particular information is found
- d) repeat the evaluation ( part a) after this education is completed
- e) use this information to help direct proposed changes to the health summary

### **Background**

Division of Information Resources (DIR) has been actively engaged in developing and refining a computerized patient record system through the last few decades. The current system, RPMS, has been widely distributed and used throughout most of the I/T/U clinical settings. Like other CPR systems, however, there has been little evaluation of effectiveness and outcome of new software applications within the RPMS system. This current proposal will evaluate three areas of our current health care IT system.

1. RPMS Lab package – the current lab package is a hybrid of the current VA lab package, and the needs of the I/T/U consumers. It is currently installed in over 100 sites throughout I/T/U settings. However, there are still many sites that are not currently using the lab package. In addition, there has never been a systemic evaluation of the clinical impact of this software application ( there have been financial evaluations)

We envision working with Indiana University and the Reigenstreif Institute. Reigenstreif is the current leader in evaluation of IT as it relates to laboratory; our current contacts with them are through the GCPR project, and our use of LOINC as a standard terminology for lab tests.

2. Health Summary - the health summary is a critical component of our RMPS system; the health summary is used clinically to provide necessary and critical information to providers. In addition, however, there is a health care reminder section of the health summary. This section currently appears at the end of the health summary. Prevention guidelines are contained within this section of the CPR. However, the diabetes audit repeatedly reveals compliance issues with these recommendations. This project will assess the impact of changing where the prevention prompts occur within the health summary.

3. Use of Health Summary – as noted above, the health summary is a critical component of our CPR. However, DIR has never fully evaluated the use of the health summary. We would propose to do the following:

## GPRA Data Quality Initiatives

# O-026

**Project Category:** Other**FY01 Project Type:** Continuation**Contact:** Griffith, Stan

This project effort will gather information to enable IHS to best design required GPRA measures. This evaluation will look at the following five pilot measures: Blood pressure control in patients with diabetes, PAPs, Access to dental services, Up-to-date immunizations in 2 year olds, and Obesity prevalence in 3-5 year olds. The goal will be to verify the accuracy of the measures using the findings in the chart as a gold standard, and to delineate and quantify the reasons for discordances. It is hoped that the conclusions from this program evaluation will provide IHS with information to allow the Agency to make better program decisions concerning how it will implement the GPRA requirements.

**Current Status: In Progress**      **% Complete:** 28%**Actual Begin Date:** 02-Oct-00      **Estimated Duration:** 12 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
1	Sr Management Anal	25.00%	12	456 Hours
1	Project Lead	25.00%	12	456 Hours
<b>Totals: 2 Staff</b>				<b>912 Hours</b>

**ITSC FY01 Priority:** 1 - Required**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐

**ISAC Goals:** 10 Comparability of Public Health      **Legislative Drivers:** GPRA  
11 Data Quality  
98 Legislated

GPRA Item #17 specifically directs IHS to develop a method by which to provide GPRA measures from existing data.

**Task Description**

The Project Lead will recruit people for the project, determine work methods, provide technical background information and overall project oversight. The Sr. Management Analyst will assist in these efforts, but in addition will analyze the data and determine recommendations based of those analyses.

**IHS Information Technology Conference**# **O-019****Project Category:** Other**FY01 Project Type:** New**Contact:** Atauvich, Jackie

This project involves the logistics and agenda planning and actual implementation of the annual IHS Information Technology Conference. ITSC will examine the possibility of contracting out arrangements and preparation of the annual IHS technology conference. The experience of internal IHS staff members planning and preparing this conference over the last several years equips them to evaluate such services on an outsourced basis.

**Current Status: In Progress**      **% Complete:** 50%**Actual Begin Date:** 04-Dec-00      **Estimated Duration:** 9 Months**Staffed By:** Both**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
2	Administrative Supp	25.00%	3	228 Hours
<b>Totals: 2 Staff</b>				<b>228 Hours</b>

**ITSC FY01 Priority:** 2 - High**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 08 Training**Legislative Drivers:**

This conference has grown over the years since its inception and preparation for it consumes a great deal of time of many IHS staff members. ITSC believes the time has come to evaluate the cost-benefit ratio of outsourcing this activity and examine the expertise of the organizations that provide this service.

**Task Description**

1. Determine a list of organizations that provide conference preparation and implementation services.
2. Prepare a statement of work based on ITSC experience in sponsoring this conference over the past few years.
3. Obtain quotes, review samples of work, and interview clients of submitting organizations.
4. Prepare a comparison of a selection of organizations to the estimated cost to IHS of presenting this conference itself.
5. Present this cost and benefit comparison to ITSC management with recommendations.

**IHS IT Outsourcing Review and Recommendation**

# O-014

**Project Category:** Other**FY01 Project Type:** New**Contact:** Gervais, Carl

This project will be an examination of the alternative to outsource IT services. Project staff will review IT service organizations and contracting alternatives. They will determine current costs to IHS for inhouse IT services and compare them to those provided by external service organizations. These comparisons will include all IT services itemized by desktop environment, infrastructure and device management, LAN and WAN networking, and server technical support. They will also include hardware and software purchase and licensure agreements, swaps and upgrades, and service level agreements.

**Current Status:** Not Started      **% Complete:** 0%**Actual Begin Date:**      **Estimated Duration:** 4 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
1	Sr Management Anal	25.00%	4	152 Hours
1	Sr Network Specialist	10.00%	4	61 Hours
1	Sr PC Specialist	10.00%	4	61 Hours
<b>Totals: 3 Staff</b>				<b>274 Hours</b>

**ITSC FY01 Priority:** 3 - Medium**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:****Legislative Drivers:**

The availability of IT service organizations and the variety of 'seat management' types of contractual arrangements available on the market now make outsourcing of IT services a viable alternative and one that offers attractive advantages to inhouse services. Not the least of these advantages is the potential ability to better understand, manage, and predict IT costs.

**Task Description**

1. Determine current IT costs with inhouse services and develop a grid of services required by IHS to maintain its technological environment.
2. Identify outsource service providers and obtain information about the levels of support and types of contractual arrangements they provide, based on the grid of services required by IHS.
3. Analyze results of the information gathering in task #2 and compare those results to the services and costs determined in task #1.
4. Define recommendations and present them with findings of the project to ITSC management.

## ITSC Project Planning and Tracking Activities

# O-020

**Project Category:** Other**FY01 Project Type:** New**Contact:** Bethea, Linza**Sponsor:** Pittman

This project acknowledges the need for continuous effort by a defined workgroup to assemble and review on a quarterly basis ongoing and planned projects for purposes of funding and progress reporting. Project plan reports and summaries will be designed and published quarterly. Key projects for each team will be selected for detailed tracking; all projects over 2 months in duration will be expected to have a designated Project Lead who will develop and maintain a WBS. Intranet-based tracking and reporting tools will be selected and deployed.

**Current Status: Ongoing (O&M % Complete:** 67%**Actual Begin Date:** 02-Oct-00 **Estimated Duration:** 12 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
2	Sr Management Anal	20.00%	12	730 Hours
4	Project Manager	5.00%	12	365 Hours
10	Project Lead	5.00%	12	912 Hours
<b>Totals: 16 Staff</b>				<b>2,006 Hours</b>

**ITSC FY01 Priority:** 2 - High**Justification****ITA:** ☐ **RPMS Growth Plan:** ☐**ISAC Goals:** 03 Annual Plan  
13 Administrative Enviroment**Legislative Drivers:** Clinger Cohen Act

ITSC is working towards more formalized and standardized project tracking and reporting throughout all teams.

**Task Description**

1. Develop and maintain the Project Plan database.
2. Review and evaluate multiple tracking systems in different departments; need to identify requirements for all uses and standardize on one or two applications, preferably Web-based (see #A-020 Project Central Evaluation)
3. Develop quarterly review and evaluation process for Project Plan.
4. Develop and distribute time-tracking policies and procedures.



**ITSC Training Program**# **A-056****Project Category:** Applications General**FY01 Project Type:** Operations & Maintenance**Contact:** Saavedra, Larry

This project will facilitate an expanded training effort in support of IHS IT staff and the RPMS packages. This is essentially a 2-fold program. The first component involves NETg online course offerings and periodic classroom instruction in existing technologies relevant to the IHS environment. The other component focuses on providing classroom instruction on the RPMS packages through the enlisted services of experienced "superusers." These volunteer trainers provide instruction on the RPMS packages at National Programs in Albuquerque and at Area Office training facilities. ITSC is currently scheduling training for the Fiscal Year 2001 targeting the most highly used and widely distributed packages with known superusers. Project staff will continue to identify additional package superusers to expand the coverage and will continue to support training efforts by established ITSC user support specialists such as those now working with the Third Party Billing, Accounts Receivable, Laboratory, and Primary Care Component packages.

Other RPMS program aspects that require attention include strengthening the training abilities of the instructors, using course evaluations to improve the training experience, providing more training at the Area level, and enhancing training materials and the way in which they are developed and presented.

**Current Status: Ongoing (O&M)**    **% Complete:**    67%**Actual Begin Date:** 02-Oct-00    **Estimated Duration:**    12 Months**Staffed By:**    In House**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
1	Jr Management Anal	25.00%	12	456 Hours
1	Project Lead	15.00%	12	274 Hours
1	Jr Training Specialist	100.00%	12	1,824 Hours
1	Sr Training Specialist	100.00%	12	1,824 Hours
<b>Totals: 4 Staff</b>				<b>4,378 Hours</b>

**ITSC FY01 Priority:**    2 - High**Justification****ITA:** ☐    **RPMS Growth Plan:** ☐**ISAC Goals:** 04    Technical Support  
08    Training**Legislative Drivers:**

IHS customers have requested more training and ITSC has been attempting to meet that need. Great progress has been made over the past year, but the effort must be continued in order to expand the training opportunities on more packages, in more Area Offices, for more users. The entire program needs to stabilize in terms of its scheduling, preparation, evaluation, technical support, and reward processes.

**Task Description**

1. Superusers: Identify and enlist more RPMS package superusers. Identify ways to reward them and those who make it possible for their periodic absences. Identify ways to enhance their training skills.
2. Scheduling: Schedule courses further ahead to enable more lead time for trainer arrangements, preparation, and notification to users.
3. Evaluations: Obtain course evaluations from all training events, summarize, and report to trainers and pertinent management.
4. Materials: Develop templates for trainers and developers to use in preparing instructional materials.
5. FasTrac Online IT Staff Training: Continue monitoring arrangements for this browser-based training via IHS/HHS team. Remove existing courses from IHS Web server at end of existing contract (October end) unless rolled into new contractual arrangements. Continue user support as necessary. Participate in implementation of new contract as requested by the IHS/HHS team. Publicize the expanded course offering when available via established ITSC communication tools (e.g., Webpage, newsletter, technical update).

**Medicare Measures Project**

# O-024

**Project Category:** Other**FY01 Project Type:** Continuation**Contact:** Griffith, Stan

HCFA and IHS are attempting jointly to determine a Medicare reimbursement rate for IHS. As part of this arrangement, HCFA requires some evaluation measures to be implemented from the NPIRS data. This project will clarify what those measures will be and implement them by programming the data generation and reporting process specifically for HCFA.

**Current Status:** Not Started      **% Complete:** 0%**Actual Begin Date:**      **Estimated Duration:** 12 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
1	Sr Programmer	5.00%	12	91 Hours
1	Project Lead	5.00%	12	91 Hours
<b>Totals: 2 Staff</b>				<b>182 Hours</b>

**ITSC FY01 Priority:** 4 - Low**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 01 Billing**Legislative Drivers:**

Providing measures derived from the NPIRS data supports the HCFA reimbursement rate agreement with IHS.

**Task Description**

The Project Lead will provide consultation services to the discussions between HCFA and IHS about the reimbursement rate and the required measures. The Sr. Programmer will actually generate the measures from the NPIRS data.

**ORYX Maintenance**# **O-029****Project Category:** Other**FY01 Project Type:** Continuation**Contact:** Gomez, Mike

ORYX is a system that surveys, tracks and reports JCAHO-related standards data for 31 IHS hospitals. ORYX data are designed to improve relevance of accreditation activities by using outcome and performance measures. This project represents the ongoing maintenance activities required to maintain and enhance the database and its reports.

**Current Status: Ongoing (O&M % Complete:** 67%**Actual Begin Date:** 02-Oct-00 **Estimated Duration:** 12 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
1	Jr Programmer	50.00%	12	912 Hours
<b>Totals: 1 Staff</b>				<b>912 Hours</b>

**ITSC FY01 Priority:** 1 - Required**Justification****ITA:** ☐ **RPMS Growth Plan:** ☐**ISAC Goals:** 11 Data Quality**Legislative Drivers:** JCAHO**Background**

The JCAHO ORYX initiative will help hospitals and long term care organizations meet the need to have objective, quantifiable information about their performance that they can use externally to demonstrate accountability. Performance measures are an integral feature of the new accreditation process.

**RPMS Ad Hoc Data Analysis Requests**

**# O-028**

***Project Category:*** Other

***FY01 Project Type:*** Continuation

***Contact:*** Griffith, Stan

**Current Status: Ongoing (O&M % Complete: 67%**

**Actual Begin Date: 02-Oct-00 Estimated Duration: Months**

**Staffed By: In House**

**Estimated InHouse FY01 Staffing Requirements**

**ITSC FY01 Priority: 4 - Low**

**Justification**

**ITA:** ☐ **RPMS Growth Plan:** ☐

**ISAC Goals:** 11 Data Quality

**Legislative Drivers:**

**Software Implementation Response (SIRT) Team**# **I-056****Project Category:** Infrastructure Security**FY01 Project Type:** New**Contact:** Gervais, Carl

This project creates a software emergency response team for IHS. It will involve the development of policies and procedures that deal with software recovery in the event of a catastrophe that compromises use of IHS desktop and server software. This team will work in concert with the Computer Emergency Response Team (see Project #I-013 to implement the Disaster Recovery Plan (Project #I-046) when events require it.

**Current Status:** Not Started      **% Complete:** 0%**Actual Begin Date:**      **Estimated Duration:** 12 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

#	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
1	Sr Database Administ	15.00%	12	274 Hours
1	Sr Network Specialist	15.00%	12	274 Hours
2	Jr Programmer	15.00%	12	547 Hours
1	Sr Programmer	15.00%	12	274 Hours
1	Project Lead	15.00%	12	274 Hours
1	Jr Systems Analyst	15.00%	12	274 Hours
1	Sr Technical Writer	15.00%	12	274 Hours
<b>Totals: 8 Staff</b>				<b>2,189 Hours</b>

**ITSC FY01 Priority:** 3 - Medium**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 98 Legislated**Legislative Drivers:** PDD-63

Identification and preparation of this team completes the capability of the IHS to respond appropriately and effectively to a catastrophe that might otherwise compromise Agency ability to conduct normal operations.

**Task Description**

1. Identify necessary team positions and assign known staff to them.
2. Define team functions in response to an actual or suspected catastrophe.
3. Define individual team member responsibilities in the event of a catastrophe.
4. Document the plan, make it available for comment, revise it as necessary, and ensure its availability to team leads for ready access when needed.
5. Exercise the plan through a mock catastrophe.

Lead Department:

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**SDST**

**Self-Determination  
Services Team**

**IHS IT Marketing/Communication Plan**

# O-001

**Project Category:** Other**FY01 Project Type:** New**Contact:** Parker, Bruce

The intent of this project is to identify opportunities by which IHS DIR can market the products and services available through ITSC to tribal, urban, and internal IHS customers. Components of this effort would include detailed market research, including tribal demographics, development of customer care strategies and philosophy, internal product/service analysis, and definition of national program and Area level relationships, all of which will ultimately result in a practical and strategic IT marketing plan.

**Current Status:** In Progress      **% Complete:** 10%**Actual Begin Date:** 02-Oct-00      **Estimated Duration:** 12 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
1	Administrative Supp	15.00%	12	274 Hours
1	Jr Management Anal	50.00%	12	912 Hours
1	Project Manager	25.00%	12	456 Hours
<b>Totals: 3 Staff</b>				<b>1,642 Hours</b>

**ITSC FY01 Priority:** 3 - Medium**Justification****ITA:** ☐      **RPMS Growth Plan:** ☒**ISAC Goals:** 15 Partnerships  
98 Legislated**Legislative Drivers:** Clinger Cohen Act  
GPRA  
HCFA

As Tribes enter into self-determination, the role of DIR ITSC should increasing become one of consultative partnering. This project sets the stage for those initiatives.

**Task Description**

1. Perform market research, including tribal demographics, and determining the needs of the tribes in terms of their technological requirements and their available resources for building and/or sustaining their technical environment. (Begin 03/2001, Complete 8/2001; 5 months)
2. Based on results of research, develop a marketing plan targeted for the tribal market. (Begin 01/2001, Complete 10/2001; 10 months)
3. Perform analysis to determine internal team relationships in the provision of products/services to tribal customers. (Begin 01/2001, Complete 09/2001; 9 months)
4. Determine and implement ways to continue support of tribal customers, including implementation of tools such as an internet presence, follow-up procedures, technical support. (Begin 02/2001, Complete 09/2001; 4 month)



**Background**

Because of the increasing trend of tribes pursuing self-determination and their independence, ITSC needs to better understand their users (internally and externally) and how to meet those needs in a cost-effective manner that maintains and enhances both the quality of services provided and the relationships.

**Self-determination Negotiators Guide**# **O-031****Project Category:** Other**FY01 Project Type:** Enhancement**Contact:** Parker, Bruce

This project is intended to reduce negotiation documentation and streamline the process of IHS negotiators. The project includes the introduction of service level agreements and cost analysis for delivery of current services.

**Current Status: In Progress**      **% Complete:** 90%**Actual Begin Date:** 01-Jan-01      **Estimated Duration:** 9 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
1	Administrative Supp	15.00%	12	274 Hours
1	Jr Management Anal	50.00%	12	912 Hours
1	Project Manager	25.00%	12	456 Hours
<b>Totals: 3 Staff</b>				<b>1,642 Hours</b>

**ITSC FY01 Priority:** 3 - Medium**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 15 Partnerships**Legislative Drivers:** Title I, Title III**Task Description**

Tasks include:

1. Update the negotiators guide and functions and services (begun 1/2001; completed pending approval).
2. Develop service level agreement template (complete).
3. Perform cost of service analysis to start est. 4/2001 and complete by 9/2001).

Lead Department:

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**TMT**

**Telecommunications  
Management Team**

**Anti-virus Procurement for IHS Enterprise**# **I-049****Project Category:** Infrastructure Security**FY01 Project Type:** Continuation**Contact:** Federico, Cathy

This project is the volume license purchase of an enterprise-wide anti-virus solution for the Agency.  
This process will follow the standard Agency purchasing practice.

**Current Status: Completed**      **% Complete:** 100%**Actual Begin Date:** 02-Oct-00      **Estimated Duration:** 4 Months      **Date Complete** 29-Mar-01**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
2	Sr Network Specialist	5.00%	1	15 Hours
1	Project Lead	10.00%	3	46 Hours
<b>Totals: 3 Staff</b>				<b>61 Hours</b>

**ITSC FY01 Priority:** 1 - Required**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 05 Connectivity  
98 Legislated**Legislative Drivers:** Comp Sec Act

This procurement will provide consistency in virus protection within the Agency and make support easier, more effective, and more efficient.

**Task Description**

1. Evaluate virus options and volume pricing.
2. Procure product licenses.
3. Distribute to all Areas/facilities.
4. Implement nationwide.
5. Continue upgrades and maintenance at all Areas/facilities.

**Banyan Elimination Plan and Implementation**# **I-045****Project Category:** Infrastructure General**FY01 Project Type:** Continuation**Contact:** Federico, Cathy

This project eliminates the Banyan Vines mail system from within the IHS infrastructure. It also eliminates the MailSync Gateway. These changes support the IHS move to the Exchange e-mail platform.

**Current Status: In Progress**      **% Complete:**      99%**Actual Begin Date:** 02-Oct-00      **Estimated Duration:**      12 Months**Staffed By:**      In House**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
1	Sr Network Specialist	5.00%	12	91 Hours
1	Project Lead	10.00%	12	182 Hours
<b>Totals: 2 Staff</b>				<b>274 Hours</b>

**ITSC FY01 Priority:**    2 - High**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 05    Connectivity**Legislative Drivers:****Task Description**

1. Eliminate Banyan vines systems throughout agency (OK, Nashville, Portland OEHE).
2. Continue national support until all Banyan servers eliminated.
3. Remove Mail Sync Gateway when all Banyan servers eliminated.

**Cache Flow Server Implementation**# **I-044****Project Category:** Infrastructure General**FY01 Project Type:** Continuation**Contact:** Fisher, Tom

This project addresses the installation and implementation of a Cache Flow Server. This server caches downloads of the recent locations accessed by internal web users and periodically updates those cached downloads by polling the web. Then, when the users return to those sites, they are internally available on the network cache server and their access does not require hitting the internet and using bandwidth. The installation includes a librarian, links to downloads, and development of web pages (see #O-006).

**Current Status:** On Hold      **% Complete:** 50%

11/1/00: On hold pending network redesign and reevaluation.

**Actual Begin Date:**      **Estimated Duration:** 1 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
1	Sr Network Specialist	10.00%	1	15 Hours
<b>Totals: 1 Staff</b>				<b>15 Hours</b>

**ITSC FY01 Priority:** 4 - Low**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 05 Connectivity**Legislative Drivers:**

Completion of this project will reduce the number of hits to the internet for similar information and will thus free bandwidth.

**Task Description**

1. Install Cache Flow server - completed.
2. Install the WCCP protocol on the Router- completed.
3. Implement server to cache web pages and evaluate the effect on the network and bandwidth usage.

**Disaster Recovery Plan for Servers**

# I-046

**Project Category:** Infrastructure Security**FY01 Project Type:** New**Contact:** Federico, Cathy

This project will produce policies to recover servers in the event of a failure of any servers housed at ITSC. Staff will document a disaster recovery plan for LAN servers including but not limited to National Exchange servers, Web servers, and the Session wall.

**Current Status:** Not Started      **% Complete:** 0%**Actual Begin Date:**      **Estimated Duration:** 6 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
3	Sr Network Specialist	10.00%	3	137 Hours
1	Project Lead	10.00%	6	91 Hours
1	Jr Technical Writer	10.00%	3	46 Hours
<b>Totals: 5 Staff</b>				<b>274 Hours</b>

**ITSC FY01 Priority:** 1 - Required**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 04 Technical Support**Legislative Drivers:** PDD-63

Development of this documentation provides IHS with the capability to respond appropriately and effectively to a catastrophe that might otherwise compromise Agency ability to conduct normal operations.

**Task Description**

1. Establish backup documentation for individual servers.
2. Develop and document disaster recovery plan for each type of server.

**E-Mail Management and Etiquette**# **O-016****Project Category:** Other**FY01 Project Type:** New**Contact:** Federico, Cathy

This project is an effort to educate e-mail users about the do's and don'ts of e-mail usage -- how and when to use group distribution, knowing who should be included in the distribution, how to manage the tone and impact of e-mail messages, etc.

**Current Status:** Not Started      **% Complete:** 0%**Actual Begin Date:**      **Estimated Duration:** 1 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
1	Sr LAN Specialist	10.00%	1	15 Hours
<b>Totals: 1 Staff</b>				<b>15 Hours</b>

**ITSC FY01 Priority:** 4 - Low**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:****Legislative Drivers:****Task Description**

1. Develop a detailed policy about the appropriate use of e-mail and e-mail group distribution.
2. Distribute the policy to personnel.
3. Address and discuss policy in ITSC general and team staff meetings.



**ETrust Intrusion Detection Software Upgrade: URL Blocking Component**# **I-082***Project Category:* Infrastructure Security*FY01 Project Type:* Enhancement*Contact:* Federico, Cathy

This project will encompass actual installation and initial configuration of all parameters involved in the suite of software that makes up Etrust URL blocking. It will also involved the retirement of the old software, Sessionwall.

**Current Status:** In Progress      **% Complete:** 25%**Actual Begin Date:** 15-May-01      **Estimated Duration:** 1 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements****ITSC FY01 Priority:** 1 - Required**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 05 Connectivity  
98 Legislated**Legislative Drivers:** Comp Sec Act**Task Description**

1. Obtain software upgrade.
2. Research installation documents and prep for installation.
3. Install in test environment first, on Sessionwall (SW) Database server.
4. Configure all parameters.
5. Test blocking mechanism.
6. Turn Sessionwall server off. Deinstall.
7. Convert test environment to live environment.
8. Turn old SW server into the Database server for ETrust
9. Test for one week to assure all settings are correct and system performing as expected.
10. Close out project.

**Comments**

Hardware will present problems as with Sessionwall – meaning processor not large enough to handle the network traffic of IHS.

**ETrust Intrusion Detection: Other Components Installation and Configuration**# **I-083****Project Category:** Infrastructure Security**FY01 Project Type:** Enhancement**Contact:** Federico, Cathy

This project will encompass actual installation and initial configuration of all parameters involved in the suite of software that makes up ETrust, such as LogView, Central and Intrusion Detection, except URL blocking (#I-082).

**Current Status: In Progress**      **% Complete:**      2%**Actual Begin Date:**      **Estimated Duration:**      2.5 Months**Staffed By:**      In House**Estimated InHouse FY01 Staffing Requirements****ITSC FY01 Priority:**      1 - Required**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 98      Legislated**Legislative Drivers:** Comp Sec Act**Task Description**

1. Obtain software upgrade.
2. Research installation documents and prep for installation.
3. Install in test environment first.
4. Configure all parameters.
5. Test each component as each install is accomplished.
6. Convert test environment to live environment.
7. Test each component for one week to assure all settings are correct and system performing as expected.
8. Close out project.

**Comments**

Hardware will present problems as with Sessionwall – meaning processor not large enough to handle the network traffic of IHS. May require the purchase of additional hardware to run these additional components.

**Fax Server Implementation Phase II**# **I-042****Project Category:** Infrastructure General**FY01 Project Type:** Continuation**Contact:** Fisher, Tom

The purpose of this project is to expand fax server access throughout IHS.

**Current Status:** Not Started      **% Complete:** 0%**Actual Begin Date:**      **Estimated Duration:** 2 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
1	Project Lead	1.00%	2	3 Hours
<b>Totals: 1 Staff</b>				<b>3 Hours</b>

**ITSC FY01 Priority:** 3 - Medium**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 05 Connectivity  
13 Administrative Enviroment**Legislative Drivers:**

The number of fax machines and fax lines in ITSC will be reduced eventually as all users are converted to desktop faxing.

**Task Description**

1. Order fax and modem server, modem card, and the necessary software operate.
2. Assure power and network connections are available.
3. Install fax board on server
4. Install software and configure parameters.
5. Order and install phone lines.
6. Test server(s) in an off-line environment.
7. Test FaxMaker Client Software and receipt/sending of faxes in limited live environment.
8. Test send/receipt of fax on all lines.
9. Make client software available on the network for ITSC users installations.
10. Convert to live environment for ITSC.
11. Install client software on all ITSC employee desktops.
12. Develop users documentation and distribute to all DIR, HQW users.
13. Notify all ITSC users of new fax numbers.

**Background**

The Fax server at ITSC-ABQ was installed for Y2K and, although Fax services are now available, they need refining. The Fax server is being maintained and upgraded. It would function better with DID lines but the expense is prohibitive. Further action on this project has been curtailed pending possible solution via MCI.

**FTS Conversion from 2000 to 2001**# **I-041****Project Category:** Infrastructure General**FY01 Project Type:** Continuation**Contact:** Fisher, Tom

This project involves converting the voice, data, and video circuits from AT&T to MCI as a cost savings measure.

**Current Status:** In Progress      **% Complete:** 82%**Actual Begin Date:** 01-Nov-00      **Estimated Duration:** 4 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
4	Sr Network Specialist	25.00%	4	608 Hours
1	Project Lead	15.00%	4	91 Hours
<b>Totals: 5 Staff</b>				<b>699 Hours</b>

**ITSC FY01 Priority:** 2 - High**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 05 Connectivity**Legislative Drivers:****Task Description**

1. Order FTS 2001 voice, data, video services.
2. Install those services.
3. Discontinue AT&T 2000 services.

**IHS WAN Support of ATM Voice and Video**# **I-039****Project Category:** Infrastructure General**FY01 Project Type:** New**Contact:** Fisher, Tom

This project involves the design and implementation of a new technology that will support voice and video over currently installed data circuits.

**Current Status:** Not Started      **% Complete:** 0%**Actual Begin Date:**      **Estimated Duration:** 12 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
5	Sr Network Specialist	25.00%	12	2,280 Hours
1	Project Lead	35.00%	12	638 Hours
<b>Totals: 6 Staff</b>				<b>2,918 Hours</b>

**ITSC FY01 Priority:** 4 - Low**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 05 Connectivity**Legislative Drivers:**

This effort will improve connectivity and provide a savings in telecommunications costs.

**Task Description**

1. Obtain user requirements.
2. Incorporate those requirements into the new network design.
3. Plan the implementation.
4. Implement the new design.
5. Continue maintenance and support of the new hardware/software.

**Implement Multi-Media Streaming Server**# **I-029****Project Category:** Infrastructure Web-Related**FY01 Project Type:** New**Contact:** Thurman, Len

This project establishes streaming media services for the IHS and customers. It uses streaming media technologies to deliver training, briefings, and other relevant materials via real time, including full motion video and/or audio. In order to fully deploy streaming media, a dedicated server will be purchased to handle multiple requests and to allow for future expansion. Most multimedia-rich websites (CNN, MSNBC, WWF, etc.) have dedicated servers to handle media requests.

**Current Status:** On Hold      **% Complete:** 10%

On hold due to low priority.

**Actual Begin Date:** 19-Mar-01      **Estimated Duration:** 3 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
2	Sr Network Specialist	50.00%	1	152 Hours
1	Jr Programmer	100.00%	1	152 Hours
1	Project Lead	100.00%	3	456 Hours
2	Jr Systems Analyst	20.00%	3	182 Hours
1	Sr Technical Writer	25.00%	1	38 Hours
1	Verifier	25.00%	1	38 Hours
<b>Totals: 8 Staff</b>				<b>1,018 Hours</b>

**ITSC FY01 Priority:** 4 - Low**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 05 Connectivity**Legislative Drivers:**

A dedicated server will prevent current production web servers from being bogged down by streaming media requests and will balance overall loading accordingly.

**Task Description**

1. Build multimedia development computer.
2. Purchase software for development and conversion.
3. Train staff to use streaming media development tools.
4. Insure ADA compliance by transcribing speech into text or text into spoken words.

**Comments**

Media development workstation and software is on order. Server requirements and requests are pending approval of this project. Staff training is in progress.

**Internet/Intranet Services Operation and Maintenance**# **I-024****Project Category:** Infrastructure General**FY01 Project Type:** Operations & Maintenance**Contact:** Fisher, Tom

This project reflects the ongoing operation and management of the IHS WWW server, intranet servers, discussion boards, listserver, and video conferencing server. This includes day-to-day maintenance of web sites and infrastructure, basic web site development, and client services and support.

**Current Status: Ongoing (O&M % Complete:** 67%**Actual Begin Date:** 02-Oct-00 **Estimated Duration:** 12 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
1	Sr Database Administ	50.00%	12	912 Hours
1	Sr LAN Specialist	25.00%	12	456 Hours
8	Sr Network Specialist	75.00%	12	10,944 Hours
1	Sr PC Specialist	50.00%	12	912 Hours
3	Jr Programmer	100.00%	12	5,472 Hours
4	Sr Programmer	100.00%	12	7,296 Hours
1	Project Lead	75.00%	12	1,368 Hours
1	Jr Systems Analyst	100.00%	12	1,824 Hours
1	Sr Technical Writer	100.00%	12	1,824 Hours
1	Verifier	50.00%	12	912 Hours
<b>Totals: 22 Staff</b>				<b>31,920 Hours</b>

**ITSC FY01 Priority:** 2 - High**Justification****ITA:** ☒ **RPMS Growth Plan:** ☒**ISAC Goals:** 04 Technical Support**Legislative Drivers:**

This project is required to provide the best possible Internet technology-related services to our customers.

**Task Description**

1. Maintain existing services and web sites.
2. Design and develop new routine sites (brochureware). Note: Web-based application development and enhancements and new large scale web site developments are listed under separate project plans.
3. Customer support and liaison activities with IHS and other agencies.

4. Skills enhancement, study, training.
5. Administrative duties.



**Network Intrusion Monitoring**# **I-066****Project Category:** Infrastructure Security**FY01 Project Type:** New**Contact:** Federico, Cathy

This project involves monitoring and maintaining the intrusion detection devices and practices put into place (see Project #I-050). Depending on the plan developed, this may involve having an external contractor conduct remote scans with our toolkit on a regular basis and provide reports of their findings. Staff responsible for monitoring for intrusions will be trained on the use of the tools implemented and the types of intrusions that may be detected.

Install intrusion detection and vulnerability assessment software to complete a layered defense. Provide mechanism to purchase, upgrade, and maintain end user PC antivirus software. Upgrade, monitor, and segment Internet gateway traffic at NPABQ in order to provide acceptable Level of Service for HQE and Tucson Area (with the eventual goal of removing these gateways).

**Current Status:** Not Started      **% Complete:** 0%

Monitoring plan will be implemented once hardware and software is installed and tested.

**Actual Begin Date:**      **Estimated Duration:** 3 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
2	Project Lead	50.00%	3	456 Hours
<b>Totals: 2 Staff</b>				<b>456 Hours</b>

**ITSC FY01 Priority:** 1 - Required**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 98 Legislated**Legislative Drivers:** PDD 63

Monitoring network for intrusion detection as required by good network practices, security practices, government procedures, and by Presidential mandate (PDD-63).

**Task Description**

1. Implement the intrusion detection plan and train staff members in the use of its tools and in the kinds of intrusions that may occur.
2. Monitor network and adjust configurations.
3. Report intrusions or suspicious activity.
4. Continue evaluation of available tools to protect network from intrusions.

**Network Security Software Implementation**# **I-050****Project Category:** Infrastructure Security**FY01 Project Type:** New**Contact:** Federico, Cathy

Purchase, installation, configuration, and deployment of network security software at ITSC.

**Current Status:** In Progress      **% Complete:** 65%**Actual Begin Date:** 11-Apr-01      **Estimated Duration:** 2 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
2	Sr Network Specialist	20.00%	4	243 Hours
1	Project Lead	10.00%	4	61 Hours
<b>Totals: 3 Staff</b>				<b>304 Hours</b>

**Other Direct Costs (ODCs) Estimate**

<u>ODC Category</u>	<u>Description</u>	<u>Total Cost</u>
Hardware	Net Ranger Intrusion Detection Appliance	\$0
Hardware	Dell 1550 3 each @ 3,4600.00	\$10,380
Software	various Cisco (see Comments)	\$0
<b>Total:</b>		<b>\$10,380</b>

**ITSC FY01 Priority:** 1 - Required**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 05 Connectivity  
98 Legislated**Legislative Drivers:** Comp Sec Act  
PDD-63

This project will enable IHS to increase security of IHS networks by preventing unauthorized users, hackers, etc., and to meet government security standards such as PDD-63, Computer Security Act.

**Task Description**

4/23/01

1. Procure software packages
2. Define Policies to be used by IHS (i.e., authentication, service types, host specifics, etc.)
3. Research, configure, test and tweak software in test phase
4. Test in live controlled environment
5. Lessons learned, tweaking, debugging, documenting, etc.
6. General deployment to entire network

10/1/00

1. Evaluate available options.
2. Purchase software/hardware.

3. Train administrators/security person.
4. Test/implement.
5. Maintain and monitor.

**Comments**

4/23/01 "Unmerged" from I-037. Software: Cisco Works 2000 (CS2K)Cisco Secure Scanner (CSS)Cisco Secure Access Control Server (CSACS)Cisco Secure Policy Manager (CSPM)Cisco Secure IDS (Intrusion Detection) (CSIDS)Note: see FW total cost for pricing on softwareSYSLOG Software (not yet purchased) (SYS)

**Norton Anti Virus Gateway Implementation**# **I-048****Project Category:** Infrastructure Security**FY01 Project Type:** Continuation**Contact:** Federico, Cathy

This project involves installation of an Agency antivirus SMTP (email & mail) gateway for filtering all email into and out of the Agency. Provide mechanism to purchase, upgrade, and maintain end user PC antivirus software. Upgrade, monitor, and segment Internet gateway traffic at NPABQ in order to provide acceptable Level of Service for HQE and Tucson Area (with the eventual goal of removing these gateways). Also see I-081 NAV Non-Exchange Implementation.

**Current Status:** Completed      **% Complete:** 100%**Actual Begin Date:** 02-Oct-00      **Estimated Duration:** 4 Months      **Date Complete****Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
3	Sr Network Specialist	90.00%	2	821 Hours
1	Project Lead	100.00%	4	608 Hours
<b>Totals: 4 Staff</b>				<b>1,429 Hours</b>

**ITSC FY01 Priority:** 1 - Required**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 05 Connectivity  
98 Legislated**Legislative Drivers:** Comp Sec Act

Deployment of the Norton Antivirus Mail Gateway on the IHS Network will provide greater virus protection and enable IHS to route all Agency mail through one gateway for virus scanning before it leaves or comes into the Agency.

**Task Description**

1. Purchase the appropriate software/hardware.
2. Test it a controlled environment.
3. Train administrators on the new product.
4. Build the gateway server and install the gateway software.
5. Implement the new product.

**Norton Antivirus Mail Gateway Non-Exchange Server Phase**# **I-081****Project Category:** Infrastructure Security**FY01 Project Type:** Continuation**Contact:** Federico, Cathy

This project will route all SMTP mail, including that coming from all Non-Exchange servers in the agency, through one Norton Antivirus gateway. It is hoped to reduce the number of points of entry into and out of our network. This will allow the agency better control of mail to and from Internet and aid in the removal of viruses before entering or leaving the agency.

**Current Status:** In Progress      **% Complete:** 12%**Actual Begin Date:** 15-Apr-01      **Estimated Duration:** 6 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
3	Jr Network Specialist	25.00%	6	684 Hours
1	Sr Network Specialist	50.00%	6	456 Hours
1	Project Lead	75.00%	6	684 Hours
<b>Totals: 5 Staff</b>				<b>1,824 Hours</b>

**Other Direct Costs (ODCs) Estimate**

ODC Category	Description	Total Cost
Equipment	1550 Server purchased for Outbound Gateway	\$4,400
Hardware	Server purchased as fault tolerance	\$4,400
<b>Total:</b>		<b>\$8,800</b>

**ITSC FY01 Priority:** 1 - Required**Justification****ITA:** ☒      **RPMS Growth Plan:** ☐
**ISAC Goals:** 05 Connectivity  
 98 Legislated
**Legislative Drivers:** Comp Sec Act

It is hoped to reduce the number of points of entry into and out of our network.

**Task Description**

1. Identify non-exchange servers in IHS.
2. Identify of those noted above, ones that will be allowed to continue smtp-direct access to the Internet.
3. Build PIX Access Control List (ACL) for these servers and the gateway.
4. Implement the ACL on the Pix.
5. Test the changed ACL for a suitable period of time to determine any issues.
6. Determine any servers affected by the ACL changes not caught in the planning stages. Reconfigure if feasible, including changes to ACL if necessary. If this occurs, retest ACL.
7. Evaluate and configure the approximately 37 non-exchange servers to reroute through the Norton

gateway reducing the number of servers as appropriate.

8. Redirect inbound traffic to agency using DNS-MX records for the above servers.
9. Research, evaluate and configure each server to relay outbound traffic thru the gateway.
10. Redesign more fault tolerance into the gateways, logical network locations, use of DNS-MX records for forwarding between gateways. Build servers as necessary.
11. Document stages of the project throughout.
12. Schedule briefing with rest of LAN to familiarize everyone with the new design and routes of email.
13. Finalize documentation , tie up loose ends, end project.

**Background**

Potential Risks:

1. Some non-exchange servers may not be reconfigurable for outbound relay.
2. Time allotted to project may be too short due to the complexity of the project, number of different non-exchange email platforms being used in IHS, and the learning/research curve needed to accomplish the tasks and goals of the project.
3. One person performing the majority of the project solo. Should something incapacitate him the project would require a novice to relearn all the complexities involved in this project and the project for NAV Gateway leading up to this project.

**Comments**

This is new technology. Leader is learning as he goes utilizing the software documentation, Exchange documentation, and all resources available to him via the Internet technical sites and the IHS purchased Norton Antivirus support.

**PIX 515 Firewall Installations – Area Offices**# **I-080****Project Category:** Infrastructure Security**FY01 Project Type:** New**Contact:** Federico, Cathy

Configuration, testing and deployment of PIX 515 Firewall appliances to each Area Office

**Current Status:** In Progress      **% Complete:** 29%**Actual Begin Date:** 11-Apr-01      **Estimated Duration:** 4 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
3	Jr Network Specialist	20.00%	4	365 Hours
4	Sr Network Specialist	20.00%	4	486 Hours
1	Project Lead	10.00%	3	46 Hours
<b>Totals: 8 Staff</b>				<b>897 Hours</b>

**Other Direct Costs (ODCs) Estimate**

ODC Category	Description	Total Cost
Hardware	PIX 515, 2650 Cisco routers (see cost I-079)	\$0
Software	Cisco IOS software (see cost I-079)	\$0
<b>Total:</b>		<b>\$0</b>

**ITSC FY01 Priority:** 1 - Required**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 98 Legislated**Legislative Drivers:** Comp Sec Act

To protect Area Offices from access by non-authorized users from other Areas

**Task Description**

1. Pick test site and plan for testing and installation
2. Configure and test hardware using Area policies and ITSC policies
3. Pilot Test at one Area office from ITSC
4. Deployment to test site
5. Testing and lessons learned phase
6. Deploy to other Areas in phases

**Comments**

This was originally included in the FW/VPN Project #I-037 but should have been its own project plan. Related to I-079.

**PIX Firewall 525 ITSC Installation**# **I-079****Project Category:** Infrastructure Security**FY01 Project Type:** New**Contact:** Federico, Cathy

Installation and configuration of PIX FW 525 at ITSC. Purpose is to protect the IHS network infrastructure from hackers.

**Current Status:** Completed      **% Complete:** 100%**Actual Begin Date:** 01-Dec-01      **Estimated Duration:** 5 Months      **Date Complete****Staffed By:** Both**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
7	Jr LAN Specialist	50.00%	5	2,660 Hours
1	Project Lead	15.00%	5	114 Hours
<b>Totals: 8 Staff</b>				<b>2,774 Hours</b>

**Other Direct Costs (ODCs) Estimate**

<u>ODC Category</u>	<u>Description</u>	<u>Total Cost</u>
Contractor Services	NAS	\$0
Hardware	PIX 525, PIX 515	\$0
Other	Total cost	\$202,000
Software	IOS Software	\$0
<b>Total:</b>		<b>\$202,000</b>

**ITSC FY01 Priority:** 1 - Required**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 05 Connectivity  
98 Legislated**Legislative Drivers:** Comp Sec Act  
PDD 63

To protect IHS data and network from hackers and unauthorized users.

**Task Description**

1. Purchase FW hardware & software
2. Schedule install with Vendor
3. Preinstall preparation
4. Installation
5. Testing and tweaking phase

**Comments**

Related to # !-080 and I-037. Total Hardware/Software/Labor for Installation for initial 525 PIX installation and purchase of 515 PIX and 2650 routers and all security software and initial training of 12 students. NOTE: Purchase of 515 and 2650 and software should be broken out over several



projects that are related to this project (Software Installation, Pix 515 and 2650 Installations)

**Public Key Infrastructure (PKI) Deployment Plan and Implementation**# **I-010****Project Category:** Infrastructure Security**FY01 Project Type:** New**Contact:** Fisher, Tom

This project is focused on the deployment and implementation of the PKI, should the results of its pilot evaluation in project #I-005 indicate it. Use of the PKI is one solution to the non-repudiatable electronic signature. See further details under #I-005 PKI Pilot and Evaluation.

**Current Status:** Not Started      **% Complete:** 0%**Actual Begin Date:**      **Estimated Duration:** 12 Months**Staffed By:** Both**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
3	Contractor Support	30.00%	6	821 Hours
1	Jr Network Specialist	25.00%	6	228 Hours
1	Sr Network Specialist	15.00%	6	137 Hours
1	Project Lead	15.00%	6	137 Hours
1	Sr Technical Writer	50.00%	2	152 Hours
<b>Totals: 7 Staff</b>				<b>1,474 Hours</b>

**ITSC FY01 Priority:** 1 - Required**Justification****ITA:** ☒      **RPMS Growth Plan:** ☒

**ISAC Goals:** 02 Interoperability  
98 Legislated

**Legislative Drivers:** Comp Sec Act  
GPEA  
HIPAA

Implementing a PKI is one of the technical security steps necessary in order for IHS to comply with to HIPAA, GPEA, and Computer Security Act requirements. Federal agencies are required to establish controls to assure adequate security for all information processed, transmitted, or stored in Federal information systems. This includes assuring that systems and applications used by the agency operate effectively and provide appropriate confidentiality, integrity, and availability, through the use of cost-effective management and personnel, and operational and technical controls to protect data resident on Federal automated information systems. PK technology has the potential to provide a secure, paperless environment. PK techniques can replace handwritten, wet signatures and digital facsimiles of handwritten signatures. PK techniques, along with a supporting infrastructure, allow secure communication between parties without any prior agreement or arrangement, while providing for authentication, integrity, and non-repudiation of the communication.

**Task Description**

TBD

**Session Wall 3 Implementation**# **I-043****Project Category:** Infrastructure General**FY01 Project Type:** Continuation**Contact:** Federico, Cathy

This project involves deployment of the Session Wall-3 Enterprise Edition software to provide network-wide high availability and reliable distributed real-time network protection. The software will be implemented at ITSC in Albuquerque and Tucson and at HQ. Installation includes the SessionWall Agent, Central, LogView Server/Client and Data Server Agent on HQE and Tucson.

**Current Status:** Completed      **% Complete:** 100%**Actual Begin Date:** 03-Jul-00      **Estimated Duration:** 3 Months      **Date Complete****Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
1	Sr LAN Specialist	15.00%	3	68 Hours
1	Project Lead	50.00%	3	228 Hours
<b>Totals: 2 Staff</b>				<b>296 Hours</b>

**ITSC FY01 Priority:** 2 - High**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 05 Connectivity  
98 Legislated**Legislative Drivers:**

This deployment will provide continued monitoring/reporting services; network monitoring, security, and usage statistics; improved bandwidth usage; and the ability to block non-productive Internet sites.

**Task Description**

The actual Installation of two servers and software will take approximately two workdays. The pre-install research and preparation will require 5 workdays. Testing phase allow 5 workdays. Conversion to live monitoring phase allow 1 workday. Management determination of inappropriate web sites, type and amount of monitoring desired from the software, responsible administrator, etc., allow 5 workdays.

**Background**

Session Wall-3 provides a surveillance screen around the network, provides extensive management and detailed reporting mechanisms. It provides a broad level of network surveillance, attack detection, inappropriate usage detection and control at multiple locations from a central console. HQW will serve as the central monitoring point. An agent will also be installed at HQE once the servers at HQW are fully functional and running for a specified period of time without major problems.

**Terminal Server Replacement Evaluation (RPMS Hardware)**# **I-055****Project Category:** Infrastructure General**FY01 Project Type:** New**Contact:** Federico, Cathy

Terminal server support and maintenance expires May 2001. This effort will determine if replacements are required or if maintenance should be extended. Staff will evaluate benefits of using Terminal Servers to support Thin Client use within IHS, including their potential cost savings, security issues, and support of desktop software.

**Current Status:** On Hold      **% Complete:** 80%

On hold pending decision from management whether to proceed. Server currently being used for Peregrine project (Asset Center Databases) due to higher priority.

**Actual Begin Date:**      **Estimated Duration:** 2 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
1	Jr LAN Specialist	0.05%	2	0 Hours
1	Project Lead	20.00%	2	61 Hours
<b>Totals: 2 Staff</b>				<b>61 Hours</b>

**ITSC FY01 Priority:** 3 - Medium**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 04 Technical Support**Legislative Drivers:**

This review of the Terminal server/Thin Client is required to determine the cost-benefit status of these systems to the IHS.

**Task Description**

Evaluate the various vendor solutions that are available.

**VA Connectivity Liaison**# **I-054****Project Category:** Infrastructure General**FY01 Project Type:** Operations &  
Maintenance**Contact:** Howe, Joye

This project maintains an important liaison function for various types of connectivity to VA services to keep IHS abreast of software, hardware, and security issues occurring in the Veterans Affairs with whom IHS is closely aligned.

**Current Status: Ongoing (O&M % Complete:** 67%**Actual Begin Date:** 02-Oct-00 **Estimated Duration:** 12 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
1	Project Lead	25.00%	12	456 Hours
<b>Totals: 1 Staff</b>				<b>456 Hours</b>

**ITSC FY01 Priority:** 2 - High**Justification****ITA:** ☒ **RPMS Growth Plan:** ☒**ISAC Goals:** 04 Technical Support  
15 Partnerships**Legislative Drivers:**

This liaison activity is a necessary link between IHS and the VHA, of particular importance to projects that involve upgrading RPMS packages to the VA version and patch level.

**Task Description**

1. Continued contact with VA personnel to obtain connectivity to various systems.
2. Continued contact with VA personnel to troubleshoot connectivity problems between IHS and VA.
3. Provide IHS users with appropriate access procedures and connectivity.

**Comments**

As required, staff liaison sets up IHS users with access to VHA software via VHA SecurNet (being tested) and their TCP-IP remote dial-in process.

**Virtual Private Network (VPN) Installation**# **I-038****Project Category:** Infrastructure Security**FY01 Project Type:** New**Contact:** Federico, Cathy

This project involves the procurement, installation, testing and deployment of Virtual Private Network (VPN) hardware/software Cisco 3030 and VPN Client Software and setup of clients across the IHS sites. Install VPN at National Programs - Albuquerque to allow tribal programs, business partners and mobile users to security access IHSnet.

The VPN must be a scalable solution(s) that supports business to business connections with BCBS, Tribal, other government agencies, and business to SOHO with small tribal and urban sites. The solution must support access to the network for telecommuters and laptops. For larger solutions, it is preferable to use known vendors - perhaps Cisco or Cabletron. Laptops require easy distribution of clients (similar to the Intel Cheva solution).

ITSC initially expects most Alaska sites to hit by VPN. Vendors (BCBS, ENVOY, etc) are expected to connect within one year and 5-10 urban clinics are expected to connect in the first year.

**Current Status: In Progress**      **% Complete:** 85%**Actual Begin Date:**      **Estimated Duration:** 12 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
2	Sr Network Specialist	20.00%	3	182 Hours
1	Project Lead	10.00%	3	46 Hours
<b>Totals: 3 Staff</b>				<b>228 Hours</b>

**Other Direct Costs (ODCs) Estimate**

ODC Category	Description	Total Cost
Hardware	3030 Cisco Concentrator	\$15,620
Software	Cisco Secure VPN Client; Cisco 3030 Client; Software Support	\$0
<b>Total:</b>		<b>\$15,620</b>

**ITSC FY01 Priority:** 1 - Required**Justification**ITA: ☐      **RPMS Growth Plan:** ☐
**ISAC Goals:** 05 Connectivity  
 98 Legislated

**Legislative Drivers:** Comp Sec Act  
 GPEA

To provide secure tunnel for remote connections to IHS network. This installation increases Tribal connectivity and increases both network security and the IHS level of compliance with government regulations and standards.

**Task Description**

1. Procure VPN software and hardware.
2. Research, configure, test and tweak software and hardware on various platforms from ITSC
3. Work with Cisco to resolve issues
4. Deploy in phases to various users within IHS who use remote access
5. Fine tune configs as issues arise

**Comments**

4/23/01 "Unmerge" this project from I-037 to separate activity. 1/1/01 Merge this project with I-037 Firewall installation as the activity is interrelated.

**Wan/LAN/OA/Servers Maintenance and Troubleshooting**# **I-052****Project Category:** Infrastructure General**FY01 Project Type:** Operations & Maintenance**Contact:** Federico, Cathy

This project reflects the daily national and local support provided on a continuous basis by the TMT team. It includes troubleshooting and maintenance of IHS servers, networks, and hardware (including NT, Exchange, SMS, SQL, Web, Security servers, etc.), and software (including Wide Area and Local Area network routers, gateways, switches, firewalls, VPNs, etc.).

**Current Status: Ongoing (O&M % Complete:** 67%**Actual Begin Date:** 02-Oct-00 **Estimated Duration:** 12 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
10	Sr Network Specialist	80.00%	12	14,592 Hours
1	Sr PC Specialist	95.00%	12	1,733 Hours
1	Project Lead	100.00%	12	1,824 Hours
<b>Totals: 12 Staff</b>				<b>18,149 Hours</b>

**ITSC FY01 Priority:** 2 - High**Justification****ITA:** ☐ **RPMS Growth Plan:** ☐**ISAC Goals:** 04 Technical Support**Legislative Drivers:**

This maintenance is in support of agency infrastructure and abides by agency regulations to maintain hardware/software/network platforms and perform required updates, patches, and regular maintenance.

**Task Description**

Ongoing maintenance performed on:

- WAN/LAN national network
- National e-mail
- Hardware/software installs, upgrades, patches, and maintenance
- National Web server



**Web Server Relocation**# **I-028****Project Category:** Infrastructure General**FY01 Project Type:** New**Contact:** Thurman, Len

This project involves the physical move of IHS web development, intranet, and primary SQL servers from Tucson to Albuquerque. Under the umbrella of this project, an existing, newer, and more powerful server will be established as the primary WWW server in Albuquerque.

**Current Status:** Completed      **% Complete:** 100%**Actual Begin Date:** 09-Apr-01      **Estimated Duration:** 1 Months      **Date Complete** 27-Apr-01**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

#	Labor Category	%	Months	Total Hours
1	Sr Database Administ	100.00%	1	152 Hours
5	Sr LAN Specialist	100.00%	0.1	76 Hours
1	Sr Network Specialist	25.00%	1	38 Hours
1	Sr Programmer	100.00%	1	152 Hours
1	Project Lead	100.00%	1	152 Hours
1	Jr Systems Analyst	50.00%	1	76 Hours
1	Verifier	100.00%	1	152 Hours
<b>Totals: 11 Staff</b>				<b>798 Hours</b>

**ITSC FY01 Priority:** 3 - Medium**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 05 Connectivity  
14 Staff Equipment**Legislative Drivers:**

This effort will consolidate the administration of all Web servers in one location. Centralizing the location of all Intranet and Internet servers, as well as upgrading existing machines and software, is critical to the long-term effectiveness of Internet information services for the agency. Further, administration of the servers by a strong server administration team in one single location is critical to long term success.

**Task Description**

CSMT Tasks:

1. Prepare computer room to accept additional power usage
2. Purchase racks for systems.
3. Physically move servers from current location to ABQ
4. Install and test
5. Implement

Web Team Tasks:

1. Complete preparation of space in the Albuquerque computer room for the three servers

2. Complete build of the new WWW server
3. Notify all users, staff, and clients utilizing machines to be moved , of any changes in addressing, accounts, trusts, etc.
4. Arrange logistics for physical move including personnel scheduling, vehicle rental, travel arrangements, etc.
5. Accomplish move over a weekend to insure minimal downtime.

**Wide-Area Network Backup System**# **I-036****Project Category:** Infrastructure General**FY01 Project Type:** New**Contact:** Fisher, Tom

This project will build in redundancy between Areas and the Albuquerque environment to provide rapid switchover of the network in case of failure.

**Current Status:** In Progress      **% Complete:** 52%**Actual Begin Date:** 02-Oct-00      **Estimated Duration:** 2 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
1	Sr Network Specialist	50.00%	2	152 Hours
1	Project Lead	10.00%	1	15 Hours
<b>Totals: 2 Staff</b>				<b>167 Hours</b>

**ITSC FY01 Priority:** 3 - Medium**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 04 Technical Support  
05 Connectivity**Legislative Drivers:**

This effort will provide failover recovery in the event of a system failure, thus ensuring greater network reliability and integrity.

**Task Description**

1. Evaluate and procure the necessary hardware.
2. Install hardware.
3. Test hardware.
4. Implement.

**Wireless Point of Care Evaluation and Recommendation**

# R-023

**Project Category:** Research & Development**FY01 Project Type:** New**Contact:** Fisher, Tom

This project effort will evaluate wireless communication products for use by providers where patient care is provided. The project effort will result in identified products, an assessment of the product and related service, and recommendations concerning their use. If implementation of wireless is recommended, the team will develop policies, procedures, and technical specifications for its use.

**Current Status:** Not Started      **% Complete:** 0%**Actual Begin Date:**      **Estimated Duration:** 12 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
1	Sr Network Specialist	10.00%	12	182 Hours
1	Project Lead	5.00%	12	91 Hours
<b>Totals: 2 Staff</b>				<b>274 Hours</b>

**ITSC FY01 Priority:** 4 - Low**Justification****ITA:** ☒      **RPMS Growth Plan:** ☐**ISAC Goals:** 05 Connectivity**Legislative Drivers:****Task Description**

1. Identify current wireless technologies.
2. Access documentation and sample products.
3. Evaluate their use, costs, incorporation into the provider/patient care environment, etc.
4. Determine recommendations and, if appropriate, policies and procedures for their use.

**X.25 Elimination Plan**# **I-040****Project Category:** Infrastructure General**FY01 Project Type:** New**Contact:** Fisher, Tom

Several IHS sites are still on X.25. This project will first eliminate the X.25, then convert those sites to frame relay.

**Current Status:** In Progress      **% Complete:** 78%**Actual Begin Date:** 02-Oct-00      **Estimated Duration:** 3 Months**Staffed By:** In House**Estimated InHouse FY01 Staffing Requirements**

<u>#</u>	<u>Labor Category</u>	<u>%</u>	<u>Months</u>	<u>Total Hours</u>
1	Sr Network Specialist	50.00%	12	912 Hours
1	Project Lead	50.00%	12	912 Hours
<b>Totals: 2 Staff</b>				<b>1,824 Hours</b>

**ITSC FY01 Priority:** 2 - High**Justification****ITA:** ☐      **RPMS Growth Plan:** ☐**ISAC Goals:** 04 Technical Support**Legislative Drivers:**

This project is being done to save cost and improve efficiency.

**Task Description**

1. Order Frame Relay Circuits from FTS 2001.
2. Install Frame Relay Circuits.
3. Reprogram routers to support frame relay.
4. De-install AT&T X.25 circuits.